

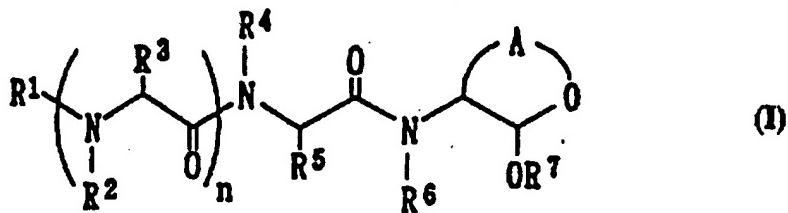


## 特許協力条約に基づいて公開された国際出願

(51) 国際特許分類6 C07D 305/08, 307/22, 309/14, C07H 5/06, 15/18, A61K 31/335, 31/34, 31/35, 31/70	A1	(11) 国際公開番号 WO96/25408 (43) 国際公開日 1996年8月22日(22.08.96)
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## (54) Title: OXYGEN-CONTAINING HETEROCYCLIC DERIVATIVES

## (54) 発明の名称 含酸素複素環誘導体

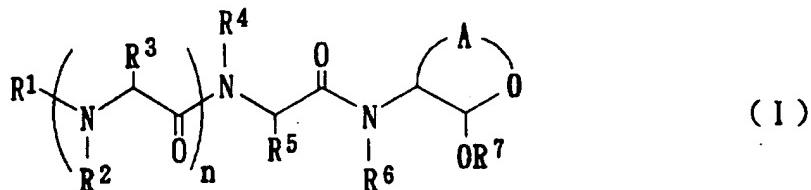


## (57) Abstract

An oxygen-containing heterocyclic derivative represented by general formula (I), a salt thereof, a solvate thereof or a hydrate thereof: wherein R<sup>1</sup> represents hydrogen, A, B, etc., (wherein R<sup>8</sup> represents C<sub>1-20</sub> alkyl, aryl, etc.); R<sup>2</sup>, R<sup>4</sup> and R<sup>6</sup> represent each hydrogen, C<sub>1-5</sub> alkyl, etc.; R<sup>3</sup> and R<sup>5</sup> represent each hydrogen, C<sub>1-20</sub> alkyl, etc.; R<sup>7</sup> represents hydrogen, C, etc. (wherein R<sup>9</sup> represents C<sub>1-10</sub> alkyl); A represents C<sub>1-3</sub> alkylene; and n is 0 or 1. The derivative, which has a potent inhibitory effect on a cysteine protease and is excellent in oral absorbability, tissue transmigration properties and cell membrane-permeability, is useful as a remedy for apoplexy, Alzheimer's diseases, etc.

(57) 要約

下記一般式（I）で表される含酸素複素環誘導体、その塩、その溶媒和物またはその水和物。



$R^+$  : 水素原子、 $R^+ - C^-$ 、 $R^+ - O - C^-$ 等

(R<sup>8</sup> : C<sub>1</sub> ~ C<sub>20</sub>のアルキル基、アリール基等)

$R^2$ 、 $R^4$ 、 $R^6$ ：水素原子、C<sub>1</sub>～C<sub>5</sub>のアルキル基等

$R^3$ 、 $R^5$ ：水素原子、 $C_1 \sim C_{20}$ のアルキル基等

$R^7$  : 水素原子、 $R^8 - C = O$  等

(R<sup>9</sup> : C<sub>1</sub> ~ C<sub>10</sub>のアルキル基)

### A : C<sub>1</sub> ~ C<sub>3</sub> のアルキレン基

n : 0 または 1

本発明の含酸素複素環誘導体はシスティンプロテアーゼに対して強い阻害作用を示し、また経口吸収性、組織移行性、細胞膜透過性にもすぐれおり、脳卒中、アルツハイマー病等の治療薬として有用である。

#### 情報としての用途のみ

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## 明細書

## 含酸素複素環誘導体

## 5 技術分野

この発明は新規な含酸素複素環誘導体に関する。

## 背景技術

パバイン、カテプシンB、カテプシンH、カテプシンL、カルバイン、  
10 インターロイキン1 $\beta$ 変換酵素等のシステインプロテアーゼの生体内での  
働きが解明されるに従い、その異常亢進が種々の疾病の原因であることが  
判明してきており、またシステインプロテアーゼ阻害剤がそれらの疾患の  
動物モデルで有効であったという報告が増えつつある。

筋ジストロフィー、筋萎縮症などの筋疾患で見られる骨格筋崩壊において、カルバインやカテプシンBなどのシステインプロテアーゼは、筋纖維蛋白質の分解を通じてZ線の消失などの初期過程に関与していると考えられている（代謝、25巻、臨時増刊号「代謝病ハイライト」、183ページ、1988年）。また、システインプロテアーゼ阻害剤であるE-64-dは、筋ジストロフィー症ハムスターにおいて延命効果があったと報告されている（Journal of Pharmacobio Dynamics, 10巻、678ページ、1987年）。したがって、システインプロテアーゼ阻害剤は筋ジストロフィー、筋萎縮症等の治療薬になると考えられる。

心筋梗塞や脳卒中等の虚血性疾患において、虚血後の細胞障害の主な原因是、キサンチン酸化酵素が產生する活性酵素である。虚血の過程で上昇したCa<sup>2+</sup>濃度によって活性化されたカルバインがキサンチン酸化酵素の

前駆体であるキサンチン脱水素酵素を限定分解して酸化酵素に変換しているという説がある (New England Journal of Medicine, 312巻、159ページ、1985年)。また、カルパインの活性化が心筋細胞死や脳神経細胞死の直接的な原因にもなりうる考えられている (最新医学、43巻、783ページ、1988年)。カルパインの阻害剤であるNCO-700が心筋梗塞の動物モデルで効果があることが報告されており (Arzneimittel Forschung/Drug Research, 36巻、190ページ、671ページ、1986年)、またE-64-cは脳虚血後の微小管結合蛋白の分解を抑制している (Brain Research, 526巻、177ページ、1990年)。したがって、カルパインの阻害剤は心筋梗塞や脳卒中などの虚血性疾患の治療薬になると考えられる。

アルツハイマー病患者の脳に特有に見られる老人斑にはアミロイドという蛋白が沈着しているが、このアミロイドはアミロイド蛋白前駆体 (APP) の分解により生成することが知られている。APPの正常代謝ではアミロイドは生成しないが、異常亢進したプロテアーゼによる異常代謝によりアミロイドが生成し、これが老人斑になると考えられている (Scientific American, 1991年11月号、40ページ)。したがって、プロテアーゼの阻害剤は、アルツハイマー病の治療薬になると期待されている。

うさぎの頭部外傷モデルにおいて、カルパインが活性化されていることが報告されており (Neurochemical Research, 16巻、483ページ、1991年)、またラットの頭部外傷モデルにおいて、カルパイン阻害剤であるロイベプチニンを投与することにより、軸策の保護作用が観察されている (Journal of Neurosurgery, 65巻、92ページ、1986年)。したがって、カルパインの

阻害剤は頭部外傷において意識障害改善や運動障害改善等の効果があると考えられる。

神経細胞の樹状突起に存在するミエリン結合蛋白がカルバインにより分解されるという報告がある (Journal of Neurochemistry, 47巻、1007ページ、1986年)。したがって、カルバインの阻害剤が神経細胞の脱髓によって起こるといわれる疾患、例えば多発性硬化症や末梢神経のニューロパシーに対して効果があると考えられる。

白内障のうちの多くのものは、水晶体中の水溶性蛋白であるクリスタリンがプロテアーゼの働きにより加水分解されるために水晶体の白濁が生じると言われている。実験モデルでの白内障およびヒトのある種の白内障では、水晶体内のカルシウム濃度が上昇しており (Investigative Ophthalmology & Visual Science, 28巻、1702ページ、1987年、Experimental Eye Research, 34巻、413ページ、1982年)、また水晶体中に含まれるプロテアーゼのうち最も多いのはカルバインであることから (Lens and Eye Toxicity Research, 6巻、725ページ、1989年)、カルバインの異常亢進が白内障の原因の一つであると考えられている。カルバインの阻害剤であるE-64が白内障の実験モデルで効果があったという報告 (Investigative Ophthalmology & Visual Science, 32巻、533ページ、1991年) もあることから、カルバインの阻害剤は白内障の治療薬になると考えられる。

炎症とのかかわり深い好中球は、走行化因子やホルボールエステルによる刺激に対して脱顆粒やスーパーオキシドの産生で応答することが知られており、これはプロテインキナーゼC (PKC) によって媒介され

- ていると考えられている。カルパインはこのPKCを活性化する働きをしており、脱颗粒には促進的に、スーパーオキシド産生には抑制的に作用しているという報告がある (Journal of Biological Chemistry, 263巻、1915ページ、1988年)。また、  
5 ラットのマクロファージにおけるカテプシンBの濃度が、白血球や好中球の場合よりも30~40倍高く、しかも炎症マクロファージの酵素濃度の方が普通のマクロファージより6倍高いと報告されている (Journal of Biochemistry, 98巻、87ページ、1985年)。  
さらに最近、ブレインターロイキン1 $\beta$ をインターロイキン1 $\beta$ に変換する酵素 (インターロイキン1 $\beta$ 変換酵素) がシステインプロテアーゼであることが判明し (Nature, 356巻、768ページ、1992年)、炎症の発現にシステインプロテアーゼの活性化が重要な働きをしていることが明らかになった。これらのことから、システインプロテアーゼの阻害剤は、抗炎症剤として用いることができると考えられる。
- 15 I型アレルギー反応は、生体が抗原に感作されることにより產生した免疫グロブリンE (IgE) を介して進行する。システインプロテアーゼ阻害剤であるエスタチンAはIgEの产生を特異的に抑制し、IgGの产生には影響を与えないと報告されている (The Journal of Antibiotics, 42巻、1362ページ、1989年)。したがって、システインプロテアーゼ阻害剤は、抗アレルギー剤として用いることができると考えられる。
- 肝細胞が壊死する場合には、細胞膜の障害によりCa<sup>2+</sup>の透過性が増して細胞内のCa<sup>2+</sup>濃度が高まってカルパインが活性化されるために、その基質である骨格蛋白等の分解が起きて細胞死にいたると考えられている。  
20 したがって、カルパインの阻害剤は劇症肝炎の治療薬として用いることができる。
- 25

カテプシンB、カテプシンL等のカテプシン類は、破骨細胞内の骨コラーゲンの分解に関与している。副甲状腺ホルモンを投与して骨破壊を亢進させたラットに、カテプシン類の阻害剤であるE-64、あるいはエスタチンAを投与すると、血中カルシウム濃度およびヒドロキシプロリン濃度が低下することが報告されている (Biochemical and Biophysical Research Communication, 125巻、441ページ、1984年、特開平2-218610号公報)。したがって、カテプシン類の阻害剤は骨粗鬆症や高カルシウム血症の治療薬になると考えられる。

カルバインの基質として、エストロゲン受容体やアンドロゲン受容体等の性ホルモン受容体がある。カルバインはこれらの受容体を活性化させることができておらず、カルバインの異常亢進は性ホルモン受容体の異常活性化によると考えられる疾患、例えば乳癌、前立腺癌、前立腺肥大等を引き起こすと言われている。したがって、カルバインの阻害剤は上記の疾患の治療薬になると考えられる。

細胞の癌化に伴い、表皮増殖因子(EGF)受容体が活性化すると言われており、カルバインはEGF受容体を基質としてこれを活性化することが知られている。また、成人T細胞性ヒト白血病ウィルス(ATLV/H-TLV-1)に感染した細胞において、カルバインが活性化されていたとの報告がある(生化学、57巻、1202ページ、1985年)。一方、カテプシンBが癌の転移の重要な段階であるコラーゲン分解を促進したり、あるいは直接コラーゲンを分解することや、新生細胞の原形質膜と関係が深いことなどから、癌の転移のプロセスに大きく関与していると言われている。(Tumor Progression and Markers, 47ページ、1982年、Journal of Biological Chemistry, 256巻、8536ページ、1984年)。

これらのことから、システインプロテアーゼの阻害剤は、癌の増殖抑制、転移予防に効果があると考えられる。

血小板が活性化されると凝集を起こし、血栓の原因となる。カルパインの阻害剤であるE-64-dが、トロンビンで惹起される血小板凝集を抑制したとの報告がある (Thrombosis Research, 57卷、847ページ、1990年)。したがって、カルパインの阻害剤は血小板凝集抑制剤として用いることができる。

以上述べてきたように、システインプロテアーゼの異常亢進は種々の疾患の原因となり、またいくつかのシステインプロテアーゼ阻害剤は動物モデルなどで有効だと報告されている。

しかしながら既知の阻害剤は、E-64 (Agricultural and Biological Chemistry, 42卷、529ページ、1978年)、E-64-d (Journal of Biochemistry, 93卷、1305ページ、1983年)、NCO-70 (特開昭58-126879号公報)、エスタチンA、B (The Journal of Antibiotics, 42卷、1362ページ、1989年) 等のエボキシコハク酸誘導体あるいはペプチドのクロロメチルケトン (Journal of Biochemistry, 99卷、173ページ、1986年) やアシルオキシメチルケトン (Biochemistry, 30卷、4678ページ、1991年) に代表されるペプチドの $\alpha$ -置換ケトンなど、不可逆阻害剤がほとんどである。一般に不可逆阻害剤は標的酵素以外の生体構成成分と非特異的に反応しやすいために毒性が強いと言われており、臨床で用いられた化合物は少ない。また、可逆阻害剤としてはロイペプチド (The Journal of Antibiotics, 22卷、283ページ、1969年)、カルペプチド (Journal of Enzyme Inhibition, 3卷、

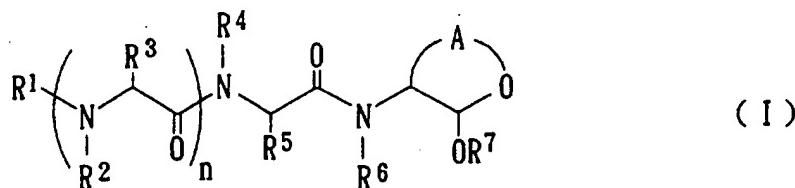
195ページ、1990年)等のペプチジルアルデヒドが知られているが、化学的な安定性、生体内での安定性、細胞膜の透過性などに問題があると言われている。

## 5 発明の開示

そこで本発明者らは、経口吸収性、組織移行性、細胞膜透過性などに優れたシステインプロテアーゼの阻害剤について研究を進めた結果、本発明を完成するに至った。

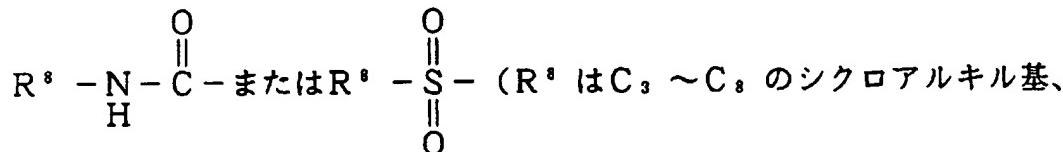
すなわち、本発明の要旨は下記一般式(I)

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(上記一般式(I)中、R<sup>1</sup>は水素原子、R<sup>8</sup>-C-、R<sup>8</sup>-O-C-、



20

C<sub>3</sub>~C<sub>8</sub>のシクロアルキルオキシ基、フルオレニル基、C<sub>1</sub>~C<sub>5</sub>のアルコキシ基、置換基を有していてもよいC<sub>6</sub>~C<sub>14</sub>のアリール基、置換基を有していてもよいC<sub>6</sub>~C<sub>14</sub>のアリールオキシ基、置換基を有していてもよいC<sub>6</sub>~C<sub>14</sub>のアリールチオ基、置換基を有していてもよいC<sub>6</sub>~C<sub>14</sub>のアリールスルホニル基および置換基を有していてもよい複素環残基からなる群より選ばれる1以上の置換基を有していてもよいC<sub>1</sub>~C<sub>20</sub>のアルキル基；C<sub>3</sub>~C<sub>8</sub>のシクロアルキル基；置換基を有していてもよいC<sub>6</sub>~C<sub>14</sub>のアリール基；置換基を有していてもよいC<sub>6</sub>~C<sub>14</sub>のアリール基

で置換されていてもよいC<sub>2</sub>～C<sub>5</sub>のアルケニル基；または置換基を有していてもよい複素環残基を表す)を表し、R<sup>2</sup>、R<sup>4</sup>およびR<sup>6</sup>はそれぞれ独立して水素原子、C<sub>1</sub>～C<sub>5</sub>のアルキル基またはC<sub>2</sub>～C<sub>5</sub>のアルカノイル基を表し、R<sup>3</sup>およびR<sup>5</sup>はそれぞれ独立して水素原子；置換基を有していてもよいC<sub>6</sub>～C<sub>14</sub>のアリール基、水酸基、C<sub>1</sub>～C<sub>5</sub>のアルコキシ基、C<sub>1</sub>～C<sub>5</sub>のアルキルチオ基およびC<sub>7</sub>～C<sub>12</sub>のアラルキルオキシ基からなる群より選ばれる1以上の置換基を有していてもよいC<sub>1</sub>～C<sub>20</sub>のアルキル基；または置換基を有していてもよいC<sub>6</sub>～C<sub>14</sub>のアリール基

10 を表し、R<sup>7</sup>は水素原子、C<sub>1</sub>～C<sub>5</sub>のアルキル基またはR<sup>8</sup>-C(=O)-  
(R<sup>9</sup>はC<sub>1</sub>～C<sub>10</sub>のアルキル基または置換基を有していてもよいC<sub>6</sub>～C<sub>12</sub>のアリール基を表す)を表し、AはC<sub>1</sub>～C<sub>3</sub>のアルキル基を有していてもよいC<sub>1</sub>～C<sub>3</sub>のアルキレン基を表し、nは0または1を表す)で表される含酸素複素環誘導体、薬学的に許容されるその塩、またはその溶媒もしくは水和物に存する。

以下、本発明について詳細に説明する。

上記一般式(I)において、R<sup>8</sup>で定義されるC<sub>1</sub>～C<sub>20</sub>のアルキル基としては、メチル基、エチル基、プロピル基、イソプロピル基、ブチル基、イソブチル基、sec-ブチル基、tert-ブチル基、ペンチル基、イソペンチル基、ネオペンチル基、tert-ペンチル基、ヘキシル基、イソヘキシル基、ヘプチル基、オクチル基、ノニル基、デシル基、ウンデシル基、ドデシル基、トリデシル基、テトラデシル基、ペンタデシル基、オクタデシル基等が挙げられ、かかるアルキル基は、シクロプロピル基、シクロブチル基、シクロペンチル基、シクロヘキシル基、シクロヘプチル基、シクロオクチル基等のC<sub>3</sub>～C<sub>8</sub>のシクロアルキル基；シクロプロピルオキシ基、シクロブチルオキシ基、シクロペンチルオキシ基、シクロヘキシ

ルオキシ基、シクロヘプチルオキシ基、シクロオクチルオキシ基等のC<sub>3</sub>～C<sub>8</sub>のシクロアルキルオキシ基；フルオレニル基；メトキシ基、エトキシ基、プロポキシ基、イソプロポキシ基、ブトキシ基、イソブトキシ基、tert-ブトキシ基、ペンチルオキシ基、イソペンチルオキシ基等のC<sub>1</sub>～C<sub>5</sub>のアルコキシ基；フェニル基、ナフチル基、アントリル基等のC<sub>6</sub>～C<sub>14</sub>のアリール基；フェノキシ基、ナフトキシ基等のC<sub>6</sub>～C<sub>14</sub>のアリールオキシ基；フェニルチオ基、ナフチルチオ基等のC<sub>6</sub>～C<sub>14</sub>のアリールチオ基；フェニルスルホニル基、ナフチルスルホニル基等のC<sub>6</sub>～C<sub>14</sub>のアリールスルホニル基；およびフラン環、ジヒドロフラン環、テトラヒドロフラン環、ピラン環、ジヒドロピラン環、テトラヒドロピラン環、ベンゾフラン環、イソベンゾフラン環、クロメン環、クロマン環、イソクロマン環、チオフェン環、ベンゾチオフェン環、ピロール環、ピロリン環、ピロリジン環、イミダゾール環、イミダゾリン環、イミダゾリジン環、ピラゾール環、ピラゾリン環、ピラゾリジン環、トリアゾール環、テトラゾール環、ピリジン環、ピリジンオキシド環、ピペリジン環、ピラジン環、ピペラジン環、ピリミジン環、ピリダジン環、インドリジン環、インドール環、インドリン環、イソインドール環、イソインドリン環、インダゾール環、ベンゾイミダゾール環、プリン環、キノリジン環、キノリン環、フタラジン環、ナフチリジン環、キノキサリン環、キナゾリン環、シンノリジン環、ブテリジン環、オキサゾール環、オキサゾリジン環、イソキサゾール環、イソキサゾリジン環、チアゾール環、チアジリジン環、イソチアゾール環、イソチアゾリジン環、ジオキサン環、ジチアン環、モルホリン環、チオモルホリン環等の酸素原子、硫黄原子、窒素原子から選ばれるヘテロ原子を1～4個有し、環を構成する総原子数が5～10の複素環残基からなる群より選ばれる1以上の置換基を有していてもよい。R<sup>8</sup>で定義されるC<sub>3</sub>～C<sub>8</sub>のシクロアルキル基およびC<sub>6</sub>～C<sub>14</sub>のアリール基としては、

上記のC<sub>1</sub>～C<sub>20</sub>のアルキル基の置換基として挙げたのと同様の基が挙げられる。C<sub>2</sub>～C<sub>5</sub>のアルケニル基としては、ビニル基、1-プロペニル基、2-プロペニル基、1-ブテニル基、1-ペンテニル基等が挙げられ、かかるプロペニル基は上記のC<sub>1</sub>～C<sub>20</sub>のアルキル基の置換基として挙げたのと同様のC<sub>6</sub>～C<sub>14</sub>のアリール基で置換されていてもよい。複素環残基としては、C<sub>1</sub>～C<sub>20</sub>のアルキル基の置換基として挙げたのと同様の基が挙げられる。

10 R<sup>2</sup>、R<sup>4</sup>およびR<sup>6</sup>で定義されるC<sub>1</sub>～C<sub>5</sub>のアルキル基としては、それぞれ独立してメチル基、エチル基、プロピル基、イソプロピル基、ブチル基、イソブチル基、ペンチル基、イソペンチル基等が挙げられ、C<sub>2</sub>～C<sub>6</sub>のアルカノイル基としては、アセチル基、プロピオニル基、ブチリル基、バレリル基等が挙げられる。

15 R<sup>3</sup>およびR<sup>5</sup>で定義されるC<sub>1</sub>～C<sub>20</sub>のアルキル基としては、それぞれ独立してR<sup>8</sup>で定義したのと同様の基が挙げられ、かかるアルキル基は、R<sup>8</sup>で定義したのと同様のC<sub>6</sub>～C<sub>14</sub>のアリール基；水酸基；R<sup>8</sup>で定義したのと同様のC<sub>1</sub>～C<sub>5</sub>のアルコキシ基；メチルチオ基、エチルチオ基、プロピルチオ基、イソプロピルチオ基、ブチルチオ基、イソブチルチオ基、tert-ブチルチオ基、ペンチルチオ基、イソペンチルチオ基等のC<sub>1</sub>～C<sub>5</sub>のアルキルチオ基；およびベンジルオキシ基、フェニルメトキシ基、ナフチルメトキシ基等のC<sub>1</sub>～C<sub>12</sub>のアラルキルオキシ基からなる群より選ばれる1以上の置換基を有してもよい。C<sub>6</sub>～C<sub>14</sub>のアリール基としては、上記で定義したのと同様の基が挙げられる。

20 R<sup>7</sup>で定義されるC<sub>1</sub>～C<sub>5</sub>のアルキル基としては、メチル基、エチル基、プロピル基、イソプロピル基、ブチル基、イソブチル基、sec-ブチル基、tert-ブチル基、ペンチル基、イソペンチル基、ネオペンチル基、tert-ペンチル基が挙げられる。

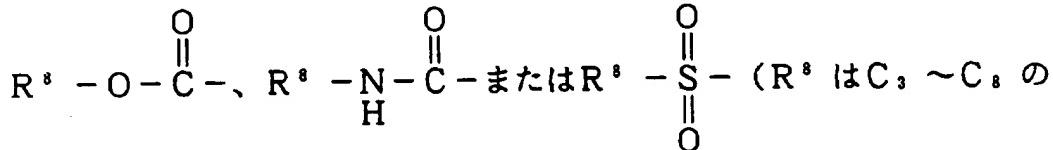
R<sup>9</sup>で定義されるC<sub>1</sub>～C<sub>10</sub>のアルキル基としては、メチル基、エチル基、プロピル基、イソプロピル基、ブチル基、イソブチル基、sec-ブチル基、tert-ブチル基、ペンチル基、イソペンチル基、ネオペンチル基、tert-ペンチル基、ヘキシル基、イソヘキシル基、ヘプチル基、オクチル基、ノニル基、デシル基等が挙げられ、C<sub>6</sub>～C<sub>12</sub>のアリール基としては、フェニル基、ナフチル基等が挙げられる。

Aで定義されるC<sub>1</sub>～C<sub>5</sub>のアルキレン基としては、メチレン基、エチレン基、プロピレン基が挙げられ、かかるアルキレン基は、メチル基、エチル基、プロピル基等のC<sub>1</sub>～C<sub>5</sub>のアルキル基を1～2個有していてもよい。

さらに上記の定義中、各置換基の端部に位置するアリール基および複素環残基は、さらにフッ素原子、塩素原子、臭素原子等のハロゲン原子；メチル基、エチル基、プロピル基、イソプロピル基、ブチル基、イソブチル基、sec-ブチル基、tert-ブチル基、ペンチル基、イソペンチル基、ネオペンチル基、tert-ペンチル基等のC<sub>1</sub>～C<sub>5</sub>のアルキル基；トリフルオロメチル基；メトキシ基、エトキシ基、プロポキシ基、イソプロポキシ基、ブトキシ基、イソブトキシ基、tert-ブトキシ基、ペンチルオキシ基、イソペンチルオキシ基等のC<sub>1</sub>～C<sub>5</sub>のアルコキシ基；メチレンジオキシ基、エチレンジオキシ基、プロピレンジオキシ基等のC<sub>1</sub>～C<sub>5</sub>のアルキレンジオキシ基；水酸基；ニトロ基；アセトキシ基、プロピオニルオキシ基、ブチリルオキシ基、バレリルオキシ基等のC<sub>2</sub>～C<sub>6</sub>のアルキルカルボニルオキシ基；カルボキシル基；メトキシカルボニル基、エトキシカルボニル基、プロポキシカルボニル基、イソプロポキシカルボニル基、ブトキシカルボニル基、イソブトキシカルボニル基、tert-ブトキシカルボニル基、ペンチルオキシカルボニル基等のC<sub>2</sub>～C<sub>6</sub>のアルコキシカルボニル基；オキソ基；アセチル基、プロピオニル基、ブチリ

ル基、バレリル基等のC<sub>2</sub>～C<sub>6</sub>のアルキルカルボニル基；アミノ基、メチルアミノ基、エチルアミノ基、プロピルアミノ基、イソプロピルアミノ基、ブチルアミノ基、イソブチルアミノ基、tert-ブチルアミノ基、ペンチルアミノ基、イソペンチルアミノ基等のC<sub>1</sub>～C<sub>5</sub>のモノアルキルアミノ基；ジメチルアミノ基、エチルメチルアミノ基、ジエチルアミノ基、メチルプロピルアミノ基、ジイソプロピルアミノ基等のC<sub>2</sub>～C<sub>10</sub>のジアルキルアミノ基；アセチルアミノ基、プロピオニルアミノ基、イソプロピオニルアミノ基、ブチリルアミノ基、バレリルアミノ基等のC<sub>2</sub>～C<sub>6</sub>のアルキルカルボニルアミノ基；カルバモイル基；メチルカルバモイル基、エチルカルバモイル基、プロピルカルバモイル基、ブチルカルバモイル基、tert-ブチルカルバモイル基、ペンチルカルバモイル基等のC<sub>2</sub>～C<sub>6</sub>のアルキルカルバモイル基およびフェニル基、ナフチル基等のC<sub>6</sub>～C<sub>12</sub>のアリール基からなる群より選ばれる1以上の置換基を有していてもよい。

15 本願発明のうち、好ましい化合物としてはR<sup>1</sup>が水素原子、R<sup>8</sup>-C(=O)-、



シクロアルキル基、フルオレニル基、置換基を有していてもよいC<sub>6</sub>～C<sub>14</sub>のアリール基、置換基を有していてもよいC<sub>6</sub>～C<sub>14</sub>のアリールオキシ基、置換基を有していてもよいC<sub>6</sub>～C<sub>14</sub>のアリールチオ基、置換基を有していてもよいC<sub>6</sub>～C<sub>14</sub>のアリールスルホニル基および置換基を有していてもよい複素環残基からなる群より選ばれる1以上の置換基を有していてもよいC<sub>1</sub>～C<sub>20</sub>のアルキル基；C<sub>3</sub>～C<sub>8</sub>のシクロアルキル基；置換基を有していてもよいC<sub>6</sub>～C<sub>14</sub>のアリール基；置換基を有していてもよいC<sub>6</sub>～C<sub>14</sub>のアリール基で置換されていてもよいC<sub>2</sub>～C<sub>5</sub>のアルケニル基；

または置換基を有していてもよい複素環残基を表す) を表し、R<sup>2</sup>、R<sup>4</sup> およびR<sup>6</sup> がそれぞれ独立して水素原子、C<sub>1</sub>～C<sub>5</sub> のアルキル基または C<sub>2</sub>～C<sub>6</sub> のアルカノイル基を表し、R<sup>3</sup> およびR<sup>5</sup> がそれぞれ独立して水素原子；または置換基を有していてもよいC<sub>6</sub>～C<sub>14</sub> のアリール基およびC<sub>1</sub>～C<sub>5</sub> のアルコキシ基からなる群より選ばれる1以上の置換基を有していてもよいC<sub>1</sub>～C<sub>20</sub> のアルキル基を表し、R<sup>7</sup> が水素原子、C<sub>1</sub>～

C<sub>5</sub> のアルキル基またはR<sup>8</sup> - C<sup>O</sup> - (R<sup>8</sup> はC<sub>1</sub>～C<sub>10</sub> のアルキル基または置換基を有していてもよいC<sub>6</sub>～C<sub>12</sub> のアリール基を表す) を表し、A がC<sub>1</sub>～C<sub>3</sub> のアルキル基を有していてもよいC<sub>1</sub>～C<sub>3</sub> のアルキレン基を表し、n が0 または1 を表す化合物が挙げられる。これらの化合物のうち、R<sup>2</sup>、R<sup>4</sup> およびR<sup>6</sup> がそれぞれ独立して水素原子またはC<sub>1</sub>～C<sub>5</sub> のアルキル基を表す化合物がより好ましく、n が0 を表す化合物がさらに好ましい。特に好ましい化合物としては、

(1) R<sub>1</sub> がR<sup>8</sup> - C<sup>O</sup> - (R<sup>8</sup> は置換基を有していてもよいC<sub>6</sub>～C<sub>14</sub> のアリール基、置換基を有していてもよいC<sub>6</sub>～C<sub>14</sub> のアリールオキシ基、置換基を有していてもよいC<sub>6</sub>～C<sub>14</sub> のアリールチオ基および置換基を有していてもよいC<sub>6</sub>～C<sub>14</sub> のアリールスルホニル基からなる群より選ばれる1以上の置換基を有していてもよいC<sub>1</sub>～C<sub>20</sub> のアルキル基；置換基を有していてもよいC<sub>6</sub>～C<sub>14</sub> のアリール基；置換基を有していてもよいC<sub>6</sub>～C<sub>14</sub> のアリール基で置換されていてもよいC<sub>2</sub>～C<sub>5</sub> のアルケニル基；または置換基を有していてもよい複素環残基を表す) を表し、R<sup>2</sup>、R<sup>4</sup> およびR<sup>6</sup> が水素原子を表し、R<sup>3</sup> およびR<sup>5</sup> がそれぞれ独立してC<sub>1</sub>～

C<sub>20</sub> のアルキル基を表し、R<sup>7</sup> が水素原子またはR<sup>9</sup> - C<sup>O</sup> - (R<sup>9</sup> はC<sub>1</sub>

～C<sub>10</sub>のアルキル基を表す) を表し、AがC<sub>1</sub>～C<sub>3</sub>のアルキレン基を表し、nが0を表す化合物、



(2) R<sub>1</sub> がR<sup>8</sup> - O - C - (R<sup>8</sup> はC<sub>3</sub>～C<sub>8</sub>のシクロアルキル基、  
5 フルオレニル基、置換基を有していてもよいC<sub>6</sub>～C<sub>14</sub>のアリール基およ  
び置換基を有していてもよい複素環残基からなる群より選ばれる1以上の  
置換基を有していてもよいC<sub>1</sub>～C<sub>20</sub>のアルキル基; C<sub>3</sub>～C<sub>8</sub>のシクロ  
アルキル基; または置換基を有していてもよいC<sub>6</sub>～C<sub>14</sub>のアリール基を  
表す) を表し、R<sup>2</sup>、R<sup>4</sup> およびR<sup>6</sup> が水素原子を表し、R<sup>3</sup> およびR<sup>5</sup>  
10 がそれぞれ独立して水素原子; または置換基を有していてもよいC<sub>6</sub>～C<sub>14</sub>  
のアリール基およびC<sub>1</sub>～C<sub>3</sub>のアルコキシ基からなる群より選ばれる1  
以上の置換基を有していてもよいC<sub>1</sub>～C<sub>20</sub>のアルキル基を表し、R<sup>7</sup> が



水素原子またはR<sup>9</sup> - C - (R<sup>9</sup> はC<sub>1</sub>～C<sub>10</sub>のアルキル基を表す) を表  
15 し、AがC<sub>1</sub>～C<sub>3</sub>のアルキレン基を表し、nが0を表す化合物、



(3) R<sub>1</sub> がR<sup>8</sup> - N(H) - C - (R<sup>8</sup> は置換基を有していてもよいC<sub>6</sub>～  
20 C<sub>14</sub>のアリール基を表す) を表し、R<sup>2</sup>、R<sup>4</sup> およびR<sup>6</sup> が水素原子を表  
し、R<sup>3</sup> およびR<sup>5</sup> がそれぞれ独立してC<sub>1</sub>～C<sub>20</sub>のアルキル基を表し、



R<sup>7</sup> が水素原子またはR<sup>9</sup> - C - (R<sup>9</sup> はC<sub>1</sub>～C<sub>10</sub>のアルキル基または  
置換基を有していてもよいC<sub>6</sub>～C<sub>12</sub>のアリール基を表す) を表し、Aが  
C<sub>1</sub>～C<sub>3</sub>のアルキレン基を表し、nが0を表す化合物、および



(4) R<sub>1</sub> がR<sup>8</sup> - S - (R<sup>8</sup> は置換基を有していてもよいC<sub>6</sub>～C<sub>14</sub>

のアリール基または置換基を有していてもよい複素環残基を表す)を表し、  
 $R^2$ 、 $R^4$ および $R^6$ が水素原子を表し、 $R^3$ および $R^5$ がそれぞれ独立して $C_1 \sim C_{20}$ のアルキル基を表し、 $R^7$ が水素原子、 $C_1 \sim C_3$ のアル

5       $\begin{array}{c} O \\ || \\ R^8 - C - \end{array}$  ( $R^8$ は $C_1 \sim C_{10}$ のアルキル基または置換基を有していてもよい $C_6 \sim C_{12}$ のアリール基を表す)を表し、Aが $C_1 \sim C_3$ のアルキル基を有していてもよい $C_1 \sim C_3$ のアルキレン基を表し、nが0を表す化合物が挙げられる。

10     上記(1)の化合物のうち、 $R^1$ が $R^8 - C -$  ( $R^8$ は置換基を有していてもよい $C_6 \sim C_{14}$ のアリール基で置換されていてもよい $C_1 \sim C_{20}$ のアルキル基または置換基を有していてもよい $C_6 \sim C_{14}$ のアリール基を表す)を表し、 $R^2$ 、 $R^4$ および $R^6$ が水素原子を表し、 $R^3$ および $R^5$ が

15      $\begin{array}{c} O \\ || \\ R^9 - C - \end{array}$  ( $R^9$ は $C_1 \sim C_{10}$ のアルキル基を表す)を表し、Aが $C_1 \sim C_3$ のアルキレン基を表し、nが0を表す化合物がより好ましい。

20     上記(2)の化合物のうち、 $R_1$ が $R^8 - O - C -$  ( $R^8$ はフルオレニル基および置換基を有していてもよい $C_6 \sim C_{14}$ のアリール基からなる群より選ばれる1以上の置換基を有していてもよい $C_1 \sim C_{20}$ のアルキル基または $C_3 \sim C_8$ のシクロアルキル基を表す)を表し、 $R^2$ 、 $R^4$ および $R^6$ が水素原子を表し、 $R^3$ および $R^5$ がそれぞれ独立して $C_1 \sim C_{20}$ の

25      $\begin{array}{c} O \\ || \\ R^7 - C - \end{array}$  ( $R^7$ は $C_1 \sim C_{10}$ のアルキル基を表す)を表し、Aが $C_1 \sim C_3$ のアルキレン基を表し、nが0を表す化合

物がより好ましい。

上記(3)の化合物のうち、R<sup>7</sup>が水素原子を表す化合物がより好ましい。

5 上記(4)の化合物のうち、R<sup>1</sup>がR<sup>8</sup>-S-(R<sup>8</sup>は置換基を有して



いてもよいC<sub>6</sub>～C<sub>14</sub>のアリール基を表す)を表し、R<sup>7</sup>がC<sub>1</sub>～C<sub>5</sub>のア

10 ルキル基を表す化合物、およびR<sup>1</sup>がR<sup>8</sup>-S-(R<sup>8</sup>は置換基を有して



いてもよいC<sub>6</sub>～C<sub>14</sub>のアリール基を表す)を表し、R<sup>7</sup>がR<sup>9</sup>-C-(R<sup>9</sup>は置換基を有していてもよいC<sub>6</sub>～C<sub>12</sub>のアリール基を表す)を表す化合物がより好ましい。

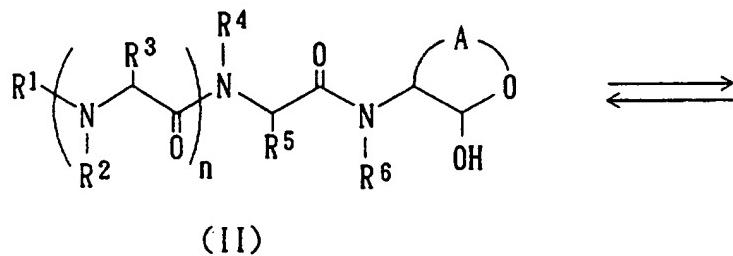
15 上記一般式(I)で表される本発明の含酸素複素環誘導体は、薬学的に許容される塩を形成することができる。かかる塩の具体例としては、酸性基が存在する場合には、リチウム塩、ナトリウム塩、カリウム塩、マグネシウム塩、カルシウム塩等の金属塩、またはアンモニウム塩、メチルアンモニウム塩、ジメチルアンモニウム塩、トリメチルアンモニウム塩、ジシクロヘキシリルアンモニウム塩等のアンモニウム塩を形成することができ、  
20 塩基性基が存在する場合には塩酸塩、臭酸塩、硫酸塩、硝酸塩、リン酸塩等の鉱酸塩、あるいはメタニスルホン酸塩、ベンゼンスルホン酸塩、パラトルエンスルホン酸塩、酢酸塩、プロピオン酸塩、酒石酸塩、フマール酸塩、マレイン酸塩、リンゴ酸塩、シュウ酸塩、コハク酸塩、クエン酸塩、  
25 安息香酸塩、マンデル酸塩、ケイ皮酸塩、乳酸塩等の有機酸塩を形成することができる。また、上記一般式(I)で表される本発明の含酸素複素環

誘導体は、溶媒和物もしくは水和物として存在することもできる。

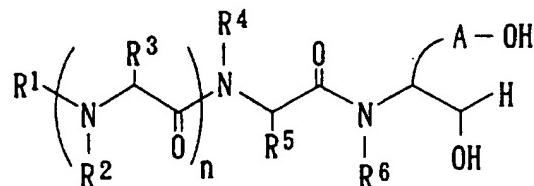
上記一般式(I)で表される本発明の含酸素複素環誘導体に存在する不斉炭素の立体化学については、それぞれ独立して(R)体、(S)体、あるいは(RS)体をとることができる。

5 上記一般式(I)で表される本発明の含酸素複素環誘導体において、R<sup>7</sup>が水素原子の場合の下記一般式(II)（式中、R<sup>1</sup>、R<sup>2</sup>、R<sup>3</sup>、R<sup>4</sup>、R<sup>5</sup>、R<sup>6</sup>、Aおよびnはすでに定義した通りである。）の化学物は、特に溶液中では下記一般式(III)（式中、R<sup>1</sup>、R<sup>2</sup>、R<sup>3</sup>、R<sup>4</sup>、R<sup>5</sup>、R<sup>6</sup>、Aおよびnはすでに定義した通りである。）で表されるヒドロキシアルデヒド誘導体との平衡が存在する。このことは、次の実験結果により説明できる。NMRの測定結果は下記一般式(II)の構造を支持しているが、使用する溶媒の種類によって、下記一般式(II)のラクトール環上の水酸基が結合した炭素原子の立体化学の比率が違うことが、化合物(II)の立体異性体の比率の違いとして観察されている。この異性体の比率の違いは、下記の平衡が存在するために生じると考えられる。

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25



上記一般式(Ⅰ)で表される本発明の含酸素複素環誘導体の具体的な例としては、 $n = 0$ で $R'$ が水素原子の場合は下記表-1に示す化合物が、 $n = 0$ で $R'$ が水素原子ではない場合は下記表-2に示す化合物が、 $n = 1$ で $R'$ が水素原子の場合は下記表-3に示す化合物が、 $n = 1$ で $R'$ が水素原子ではない場合は下記表-4に示す化合物が挙げられる。

表 - 1 (n = 0 の場合)

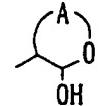
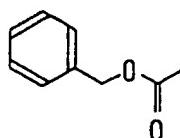
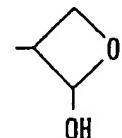
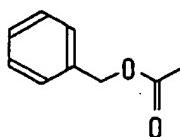
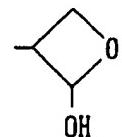
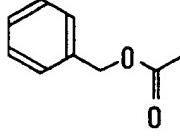
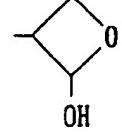
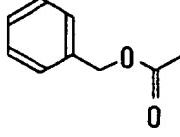
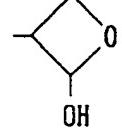
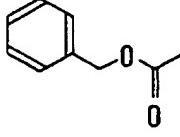
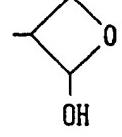
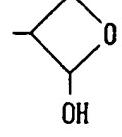
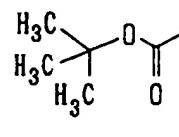
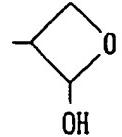
化合物番号	R <sup>1</sup>	R <sup>4</sup>	R <sup>5</sup>	R <sup>6</sup>	
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2		-H	-CH <sub>3</sub>	-H	
3		-H	-CH <sub>2</sub> CH <sub>2</sub> CH <sub>3</sub>	-H	
4		-H	-CH(CH <sub>3</sub> ) <sub>2</sub>	-H	
5		-H	-CH <sub>2</sub> CH <sub>2</sub> CH <sub>2</sub> CH <sub>3</sub>	-H	
6	H-	-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H	
7		-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H	

表 - 1 (つづき)

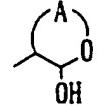
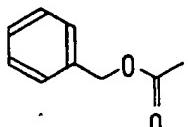
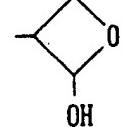
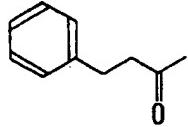
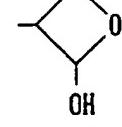
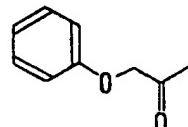
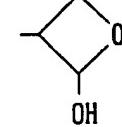
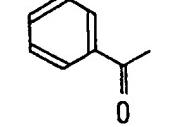
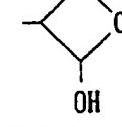
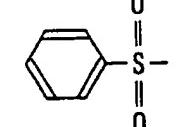
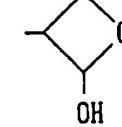
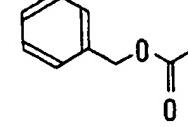
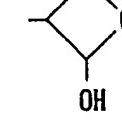
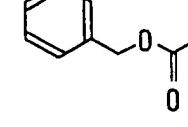
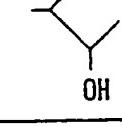
化合物番号	R <sup>1</sup>	R <sup>4</sup>	R <sup>5</sup>	R <sup>6</sup>	
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9		-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H	
10		-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H	
11		-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H	
12		-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H	
13		-H	-CH <sub>2</sub> -C <sub>6</sub> H <sub>5</sub>	-H	
14		-H	-CH <sub>2</sub> CH <sub>2</sub> SCH <sub>3</sub>	-H	

表 - 1 (つづき)

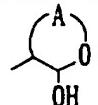
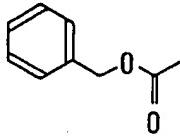
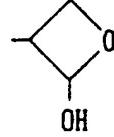
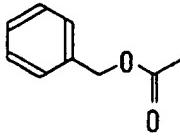
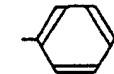
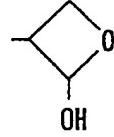
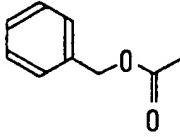
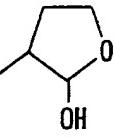
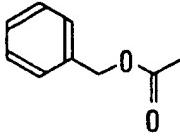
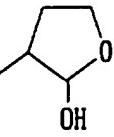
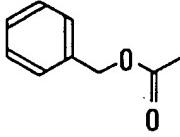
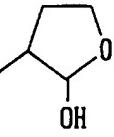
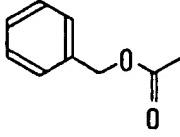
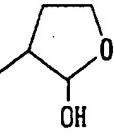
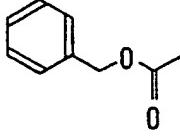
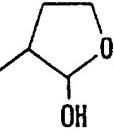
化合物番号	R <sup>1</sup>	R <sup>4</sup>	R <sup>5</sup>	R <sup>6</sup>	
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16		-H		-H	
17		-H	-H	-H	
18		-H	-CH <sub>3</sub>	-H	
19		-H	-CH <sub>2</sub> CH <sub>3</sub>	-H	
20		-H	-CH <sub>2</sub> CH <sub>2</sub> CH <sub>3</sub>	-H	
21		-H	-CH(CH <sub>3</sub> ) <sub>2</sub>	-H	

表 - 1 (つづき)

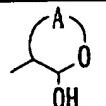
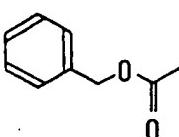
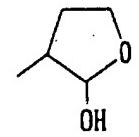
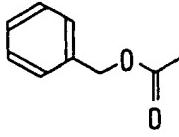
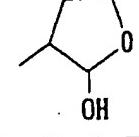
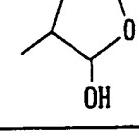
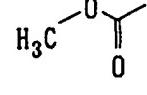
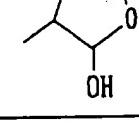
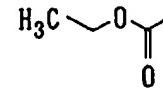
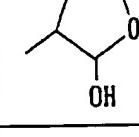
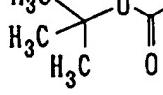
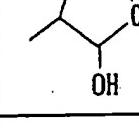
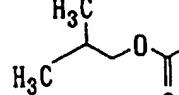
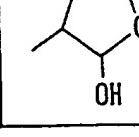
化合物番号	R <sup>1</sup>	R <sup>4</sup>	R <sup>5</sup>	R <sup>6</sup>	
22		-H	-CH <sub>2</sub> CH <sub>2</sub> CH <sub>2</sub> CH <sub>3</sub>	-H	
23		-H	-CH(CH <sub>3</sub> )CH <sub>2</sub> CH <sub>3</sub>	-H	
24	H-	-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H	
25		-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H	
26		-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H	
27		-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H	
28		-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H	

表 - 1 (つづき)

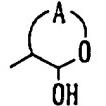
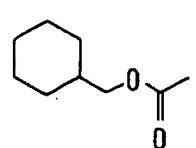
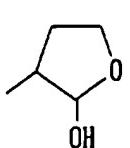
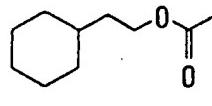
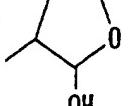
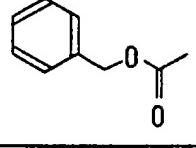
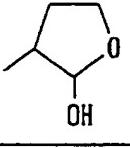
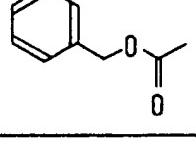
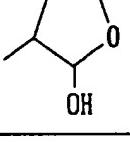
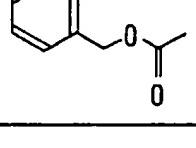
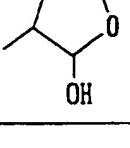
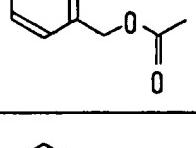
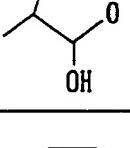
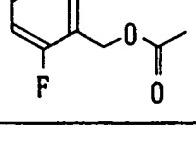
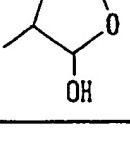
化合物番号	R <sup>1</sup>	R <sup>4</sup>	R <sup>5</sup>	R <sup>6</sup>	
29		-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H	
30		-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H	
31		-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H	
32		-CH <sub>3</sub>	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H	
33		-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-CH <sub>3</sub>	
34		-CH <sub>3</sub>	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-CH <sub>3</sub>	
35		-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H	

表 - 1 (つづき)

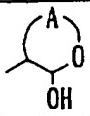
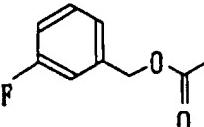
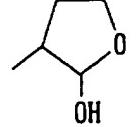
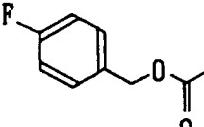
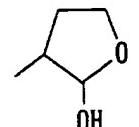
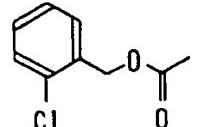
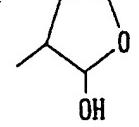
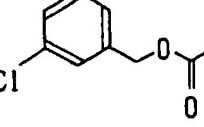
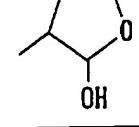
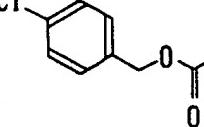
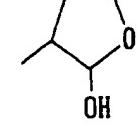
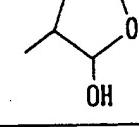
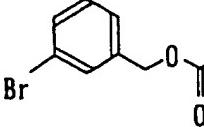
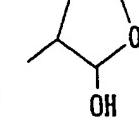
化合物番号	R <sup>1</sup>	R <sup>4</sup>	R <sup>5</sup>	R <sup>6</sup>	
36		-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H	
37		-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H	
38		-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H	
39		-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H	
40		-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H	
41		-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H	
42		-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H	

表 - 1 (つづき)

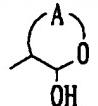
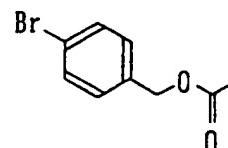
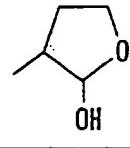
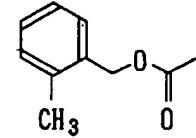
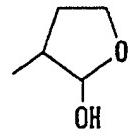
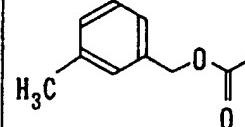
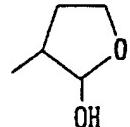
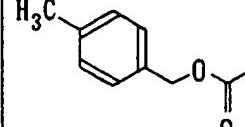
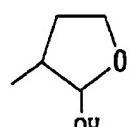
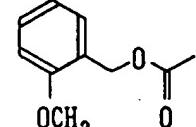
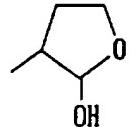
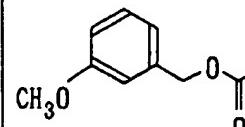
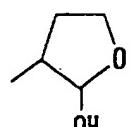
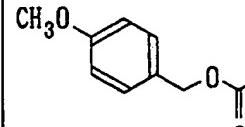
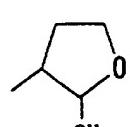
化合物番号	R <sup>1</sup>	R <sup>4</sup>	R <sup>5</sup>	R <sup>6</sup>	
43		-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H	
44		-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H	
45		-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H	
46		-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H	
47		-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H	
48		-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H	
49		-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H	

表 - 1 (つづき)

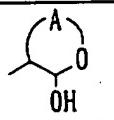
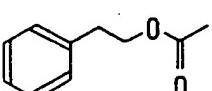
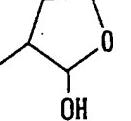
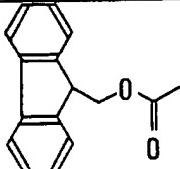
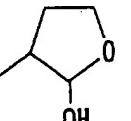
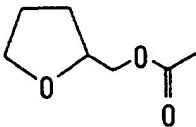
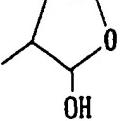
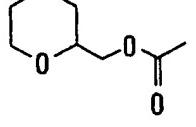
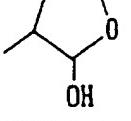
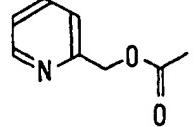
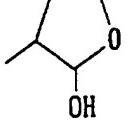
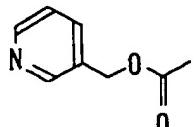
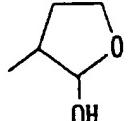
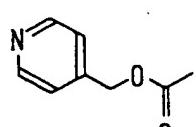
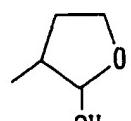
化合物番号	R <sup>1</sup>	R <sup>4</sup>	R <sup>5</sup>	R <sup>6</sup>	
50		-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H	
51		-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H	
52		-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H	
53		-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H	
54		-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H	
55		-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H	
56		-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H	

表 - 1 (つづき)

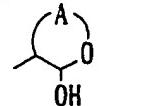
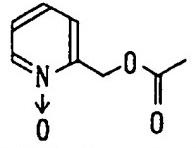
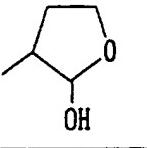
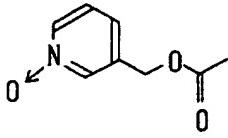
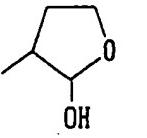
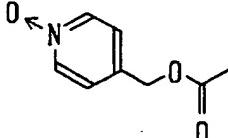
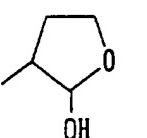
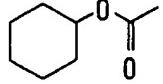
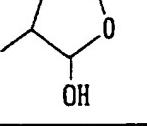
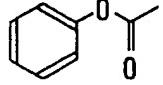
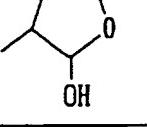
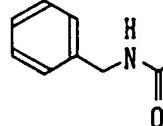
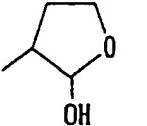
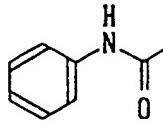
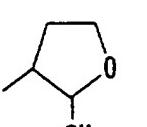
化合物番号	R <sup>1</sup>	R <sup>4</sup>	R <sup>5</sup>	R <sup>6</sup>	
57		-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H	
58		-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H	
59		-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H	
60		-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H	
61		-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H	
62		-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H	
63		-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H	

表 - 1 (つづき)

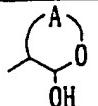
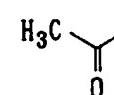
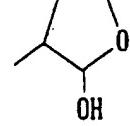
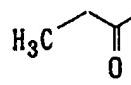
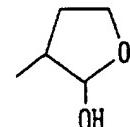
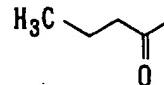
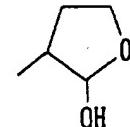
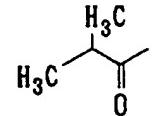
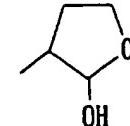
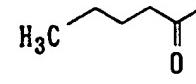
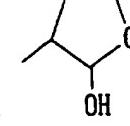
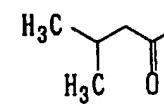
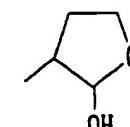
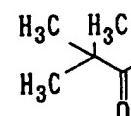
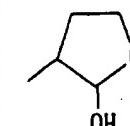
化合物番号	R <sup>1</sup>	R <sup>4</sup>	R <sup>5</sup>	R <sup>6</sup>	
64		-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H	
65		-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H	
66		-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H	
67		-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H	
68		-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H	
69		-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H	
70		-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H	

表 - 1 (つづき)

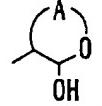
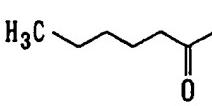
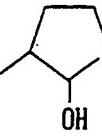
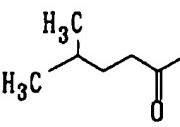
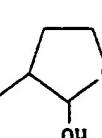
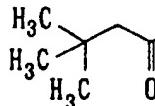
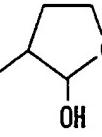
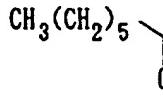
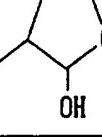
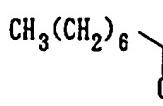
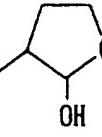
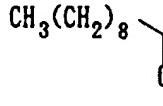
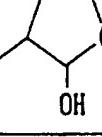
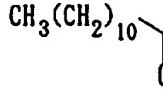
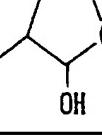
化合物番号	R <sup>1</sup>	R <sup>4</sup>	R <sup>5</sup>	R <sup>6</sup>	
71		-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H	
72		-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H	
73		-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H	
74		-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H	
75		-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H	
76		-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H	
77		-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H	

表 - 1 (つづき)

化合物番号	R <sup>1</sup>	R <sup>4</sup>	R <sup>5</sup>	R <sup>6</sup>	
78		-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H	
79		-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H	
80		-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H	
81		-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H	
82		-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H	
83		-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H	
84		-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H	

表 - 1 (つづき)

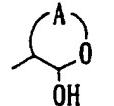
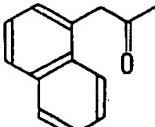
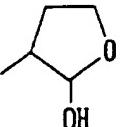
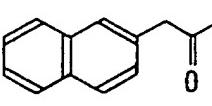
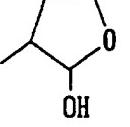
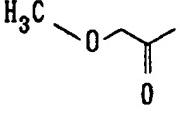
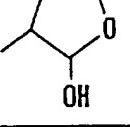
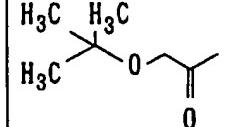
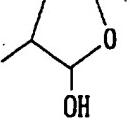
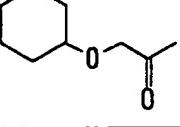
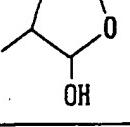
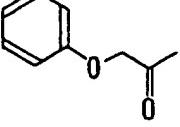
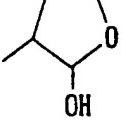
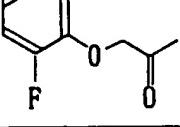
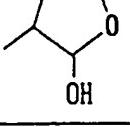
化合物 番号	R <sup>1</sup>	R <sup>4</sup>	R <sup>5</sup>	R <sup>6</sup>	
85		-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H	
86		-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H	
87		-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H	
88		-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H	
89		-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H	
90		-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H	
91		-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H	

表 - 1 (つづき)

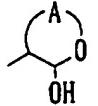
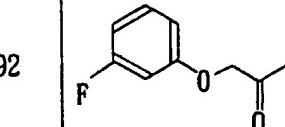
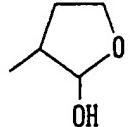
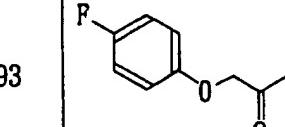
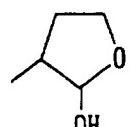
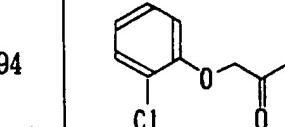
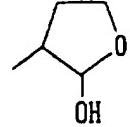
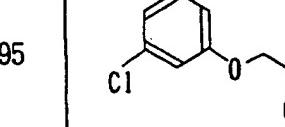
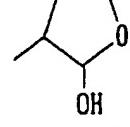
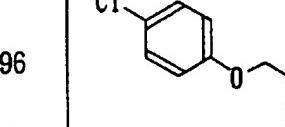
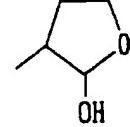
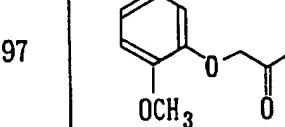
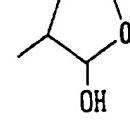
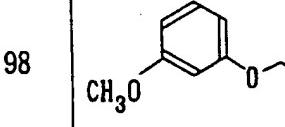
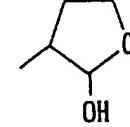
化合物 番号	R <sup>1</sup>	R <sup>4</sup>	R <sup>5</sup>	R <sup>6</sup>	
92		-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H	
93		-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H	
94		-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H	
95		-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H	
96		-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H	
97		-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H	
98		-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H	

表 - 1 (つづき)

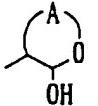
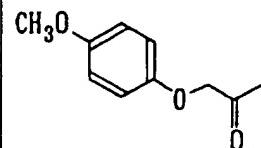
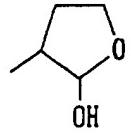
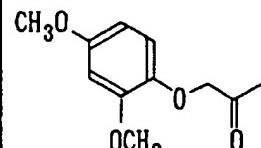
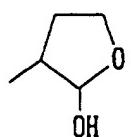
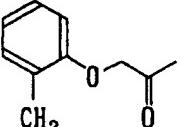
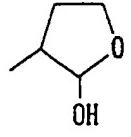
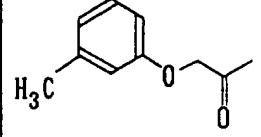
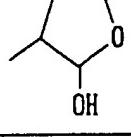
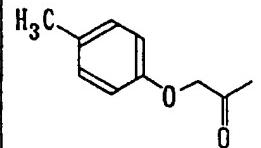
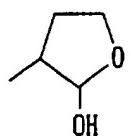
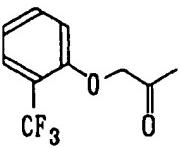
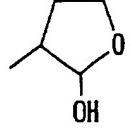
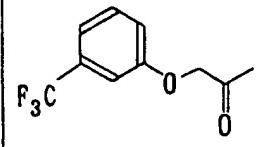
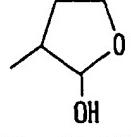
化合物番号	R <sup>1</sup>	R <sup>4</sup>	R <sup>5</sup>	R <sup>6</sup>	
99		-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H	
100		-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H	
101		-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H	
102		-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H	
103		-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H	
104		-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H	
105		-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H	

表 - 1 (つづき)

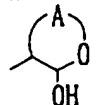
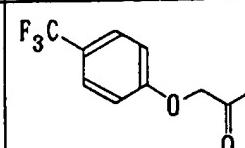
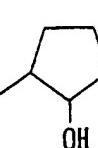
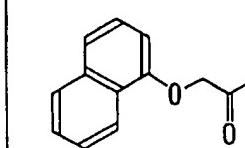
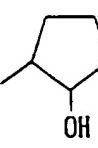
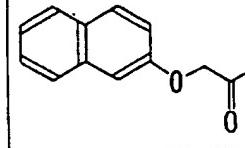
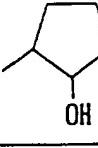
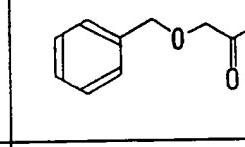
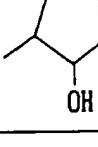
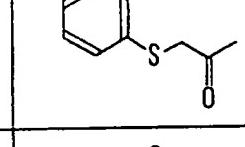
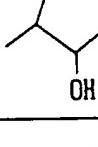
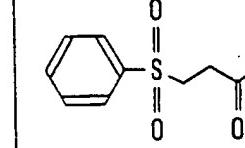
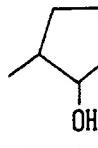
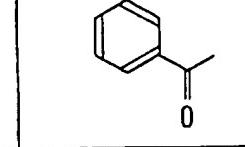
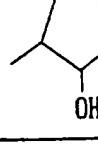
化合物番号	R <sup>1</sup>	R <sup>4</sup>	R <sup>5</sup>	R <sup>6</sup>	
106		-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H	
107		-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H	
108		-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H	
109		-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H	
110		-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H	
111		-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H	
112		-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H	

表 - 1 (つづき)

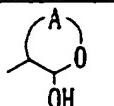
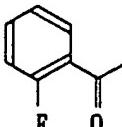
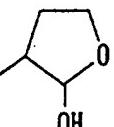
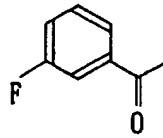
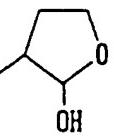
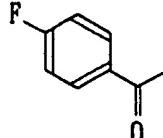
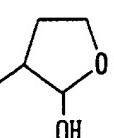
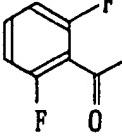
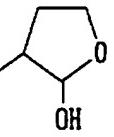
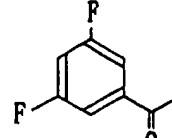
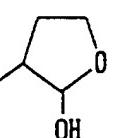
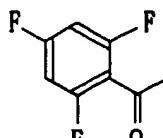
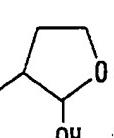
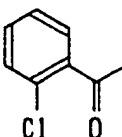
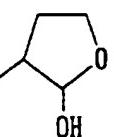
化合物番号	R <sup>1</sup>	R <sup>4</sup>	R <sup>5</sup>	R <sup>6</sup>	
113		-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H	
114		-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H	
115		-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H	
116		-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H	
117		-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H	
118		-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H	
119		-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H	

表 - 1 (つづき)

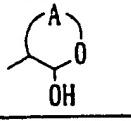
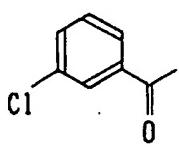
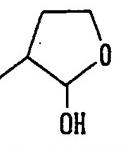
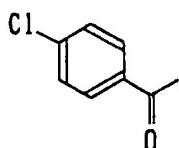
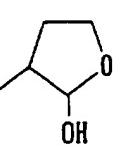
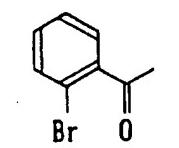
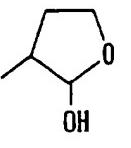
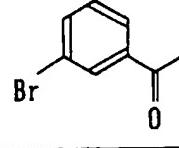
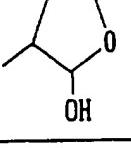
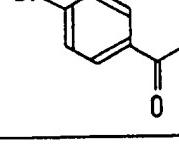
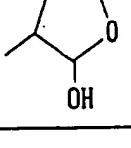
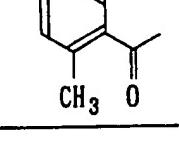
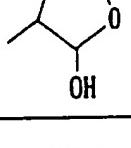
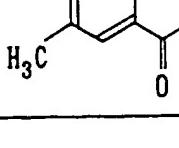
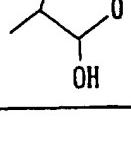
化合物番号	R1	R4	R5	R6	
120		-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H	
121		-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H	
122		-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H	
123		-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H	
124		-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H	
125		-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H	
126		-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H	

表 - 1 (つづき)

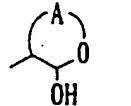
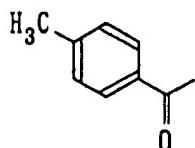
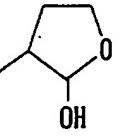
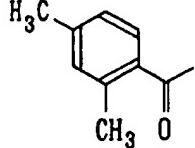
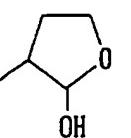
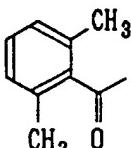
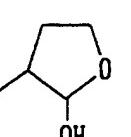
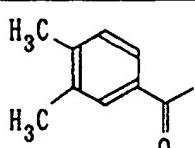
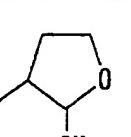
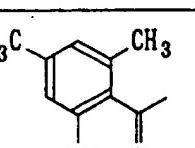
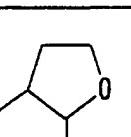
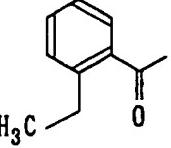
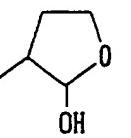
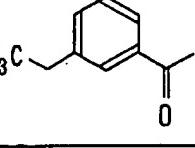
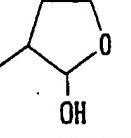
化合物 番号	R <sup>1</sup>	R <sup>4</sup>	R <sup>5</sup>	R <sup>6</sup>	
127		-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H	
128		-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H	
129		-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H	
130		-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H	
131		-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H	
132		-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H	
133		-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H	

表 - 1 (つづき)

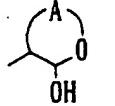
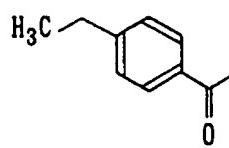
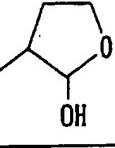
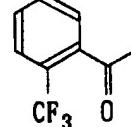
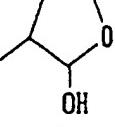
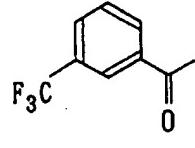
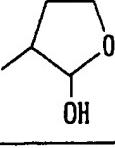
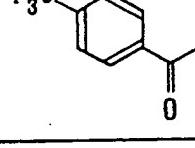
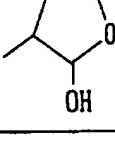
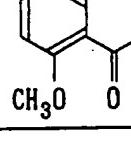
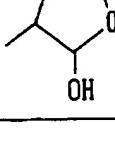
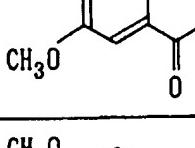
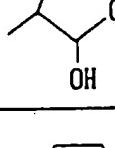
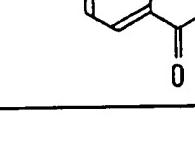
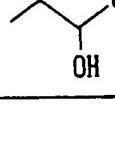
化合物番号	R <sup>1</sup>	R <sup>4</sup>	R <sup>5</sup>	R <sup>6</sup>	
134		-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H	
135		-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H	
136		-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H	
137		-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H	
138		-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H	
139		-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H	
140		-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H	

表 - 1 (つづき)

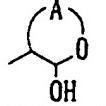
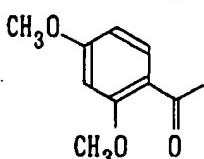
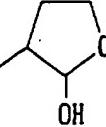
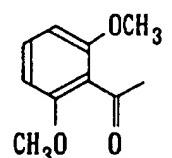
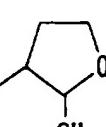
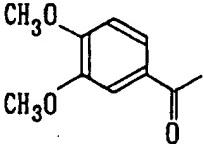
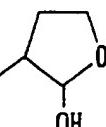
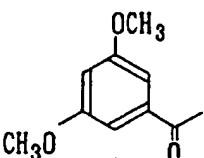
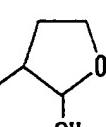
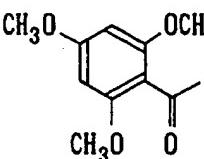
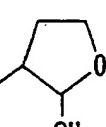
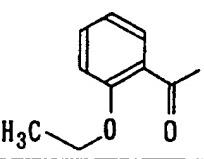
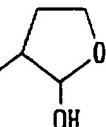
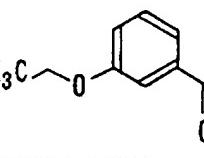
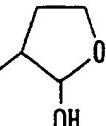
化合物番号	R <sup>1</sup>	R <sup>4</sup>	R <sup>5</sup>	R <sup>6</sup>	
141		-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H	
142		-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H	
143		-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H	
144		-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H	
145		-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H	
146		-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H	
147		-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H	

表 - 1 (つづき)

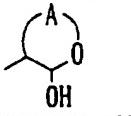
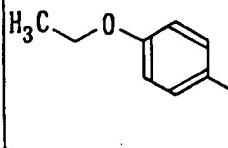
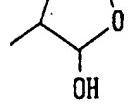
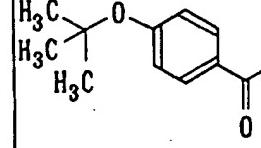
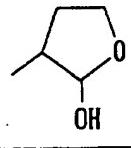
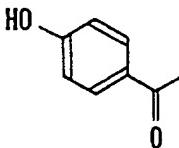
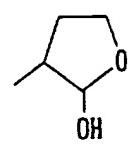
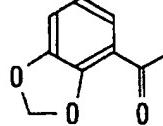
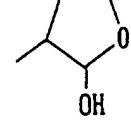
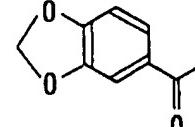
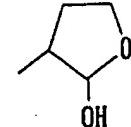
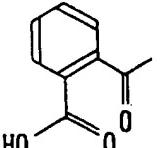
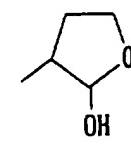
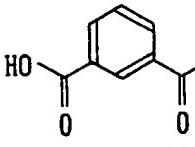
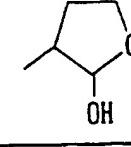
化合物 番号	R <sup>1</sup>	R <sup>4</sup>	R <sup>5</sup>	R <sup>6</sup>	
148		-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H	
149		-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H	
150		-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H	
151		-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H	
152		-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H	
153		-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H	
154		-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H	

表 - 1 (つづき)

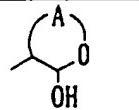
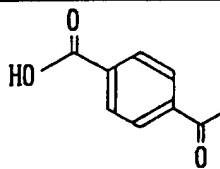
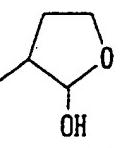
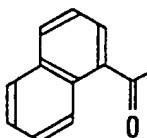
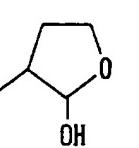
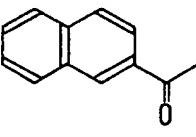
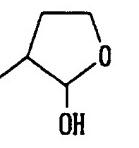
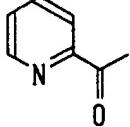
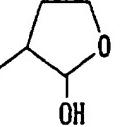
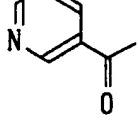
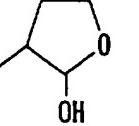
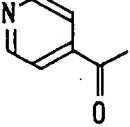
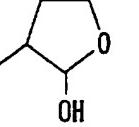
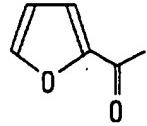
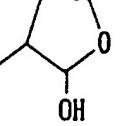
化合物番号	R <sup>1</sup>	R <sup>4</sup>	R <sup>5</sup>	R <sup>6</sup>	
155		-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H	
156		-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H	
157		-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H	
158		-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H	
159		-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H	
160		-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H	
161		-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H	

表 - 1 (つづき)

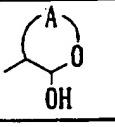
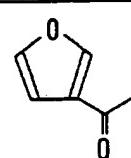
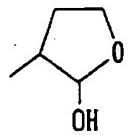
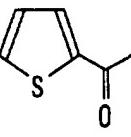
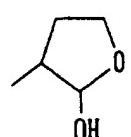
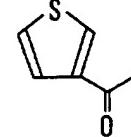
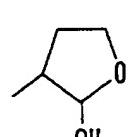
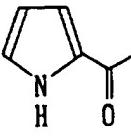
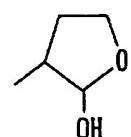
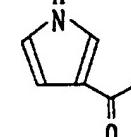
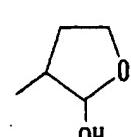
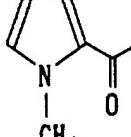
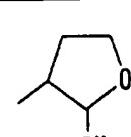
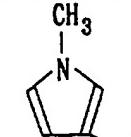
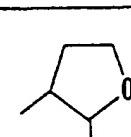
化合物番号	R <sup>1</sup>	R <sup>4</sup>	R <sup>5</sup>	R <sup>6</sup>	
162		-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H	
163		-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H	
164		-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H	
165		-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H	
166		-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H	
167		-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H	
168		-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H	

表 - 1 (つづき)

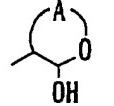
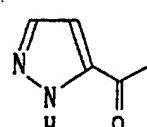
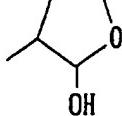
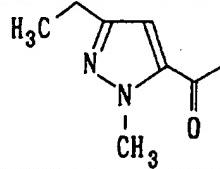
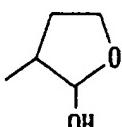
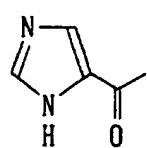
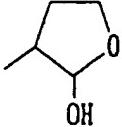
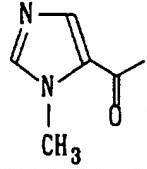
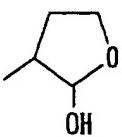
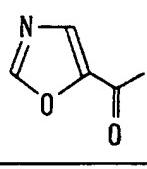
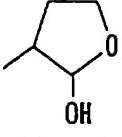
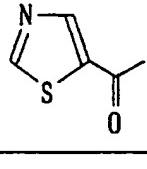
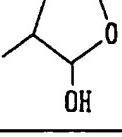
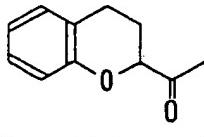
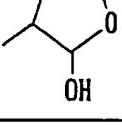
化合物 番号	R <sup>1</sup>	R <sup>4</sup>	R <sup>5</sup>	R <sup>6</sup>	
169		-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H	
170		-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H	
171		-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H	
172		-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H	
173		-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H	
174		-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H	
175		-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H	

表 - 1 (つづき)

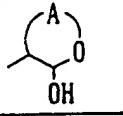
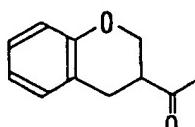
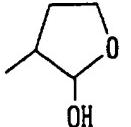
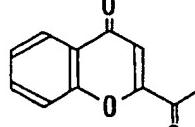
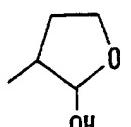
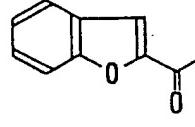
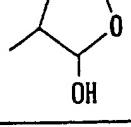
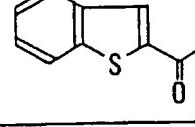
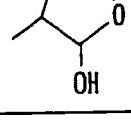
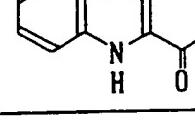
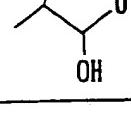
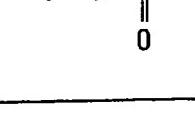
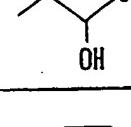
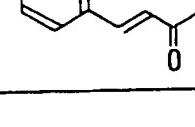
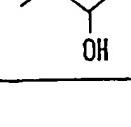
化合物番号	R <sup>1</sup>	R <sup>4</sup>	R <sup>5</sup>	R <sup>6</sup>	
176		-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H	
177		-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H	
178		-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H	
179		-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H	
180		-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H	
181		-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H	
182		-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H	

表 - 1 (つづき)

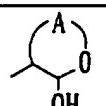
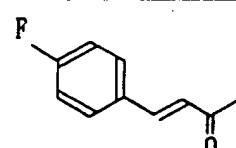
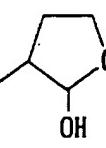
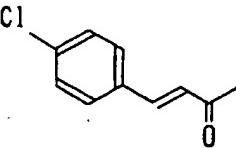
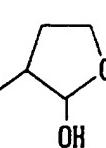
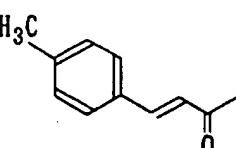
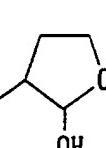
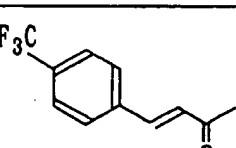
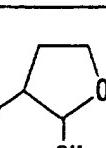
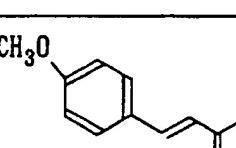
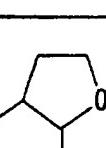
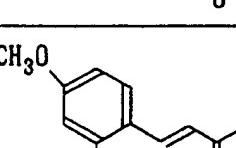
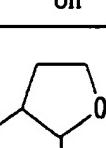
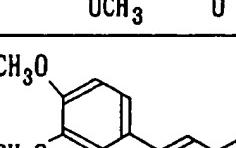
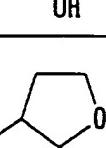
化合物 番号	R <sup>1</sup>	R <sup>4</sup>	R <sup>5</sup>	R <sup>6</sup>	
183		-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H	
184		-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H	
185		-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H	
186		-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H	
187		-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H	
188		-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H	
189		-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H	

表 - 1 (つづき)

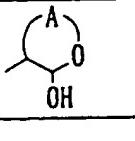
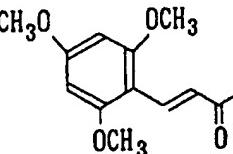
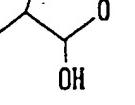
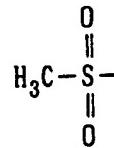
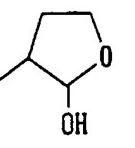
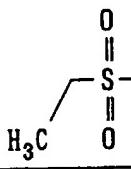
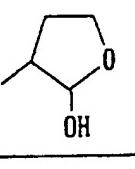
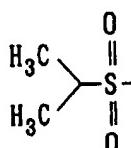
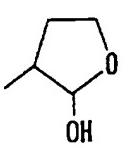
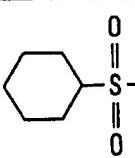
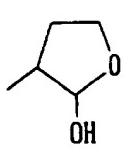
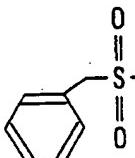
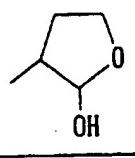
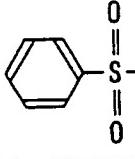
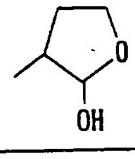
化合物 番号	R <sup>1</sup>	R <sup>4</sup>	R <sup>5</sup>	R <sup>6</sup>	
190		-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H	
191		-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H	
192		-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H	
193		-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H	
194		-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H	
195		-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H	
196		-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H	

表 - 1 (つづき)

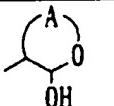
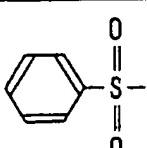
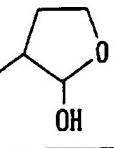
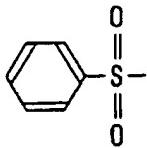
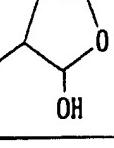
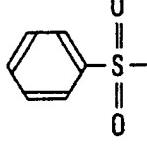
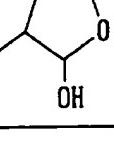
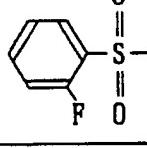
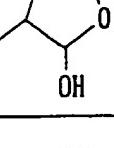
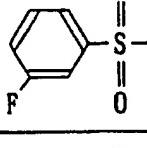
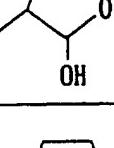
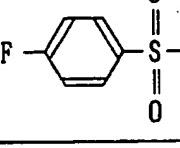
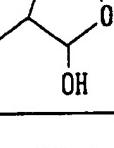
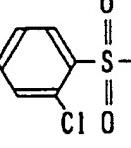
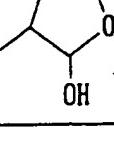
化合物番号	R <sup>1</sup>	R <sup>4</sup>	R <sup>5</sup>	R <sup>6</sup>	
197		-CH <sub>3</sub>	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H	
198		-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-CH <sub>3</sub>	
199		-CH <sub>3</sub>	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-CH <sub>3</sub>	
200		-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H	
201		-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H	
202		-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H	
203		-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H	

表 - 1 (つづき)

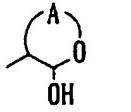
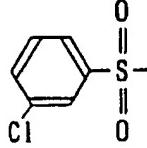
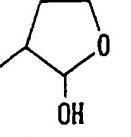
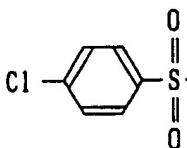
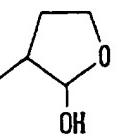
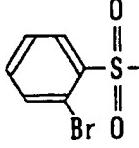
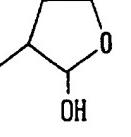
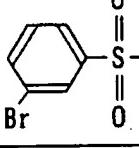
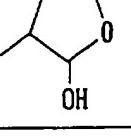
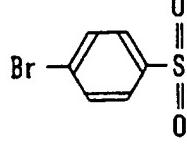
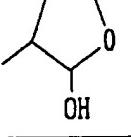
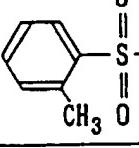
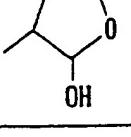
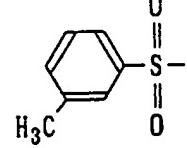
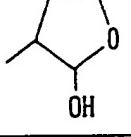
化合物 番号	R <sup>1</sup>	R <sup>4</sup>	R <sup>5</sup>	R <sup>6</sup>	
204		-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H	
205		-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H	
206		-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H	
207		-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H	
208		-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H	
209		-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H	
210		-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H	

表 - 1 (つづき)

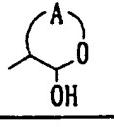
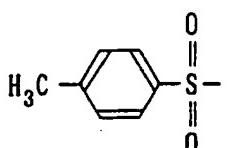
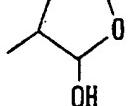
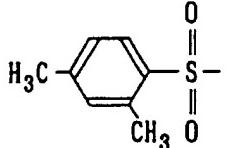
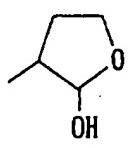
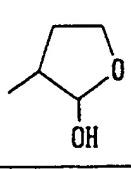
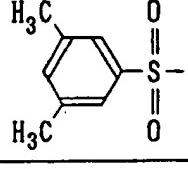
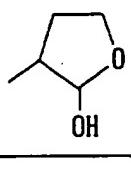
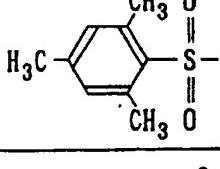
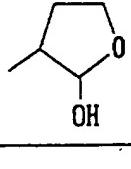
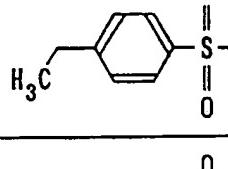
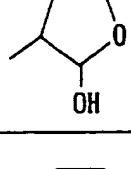
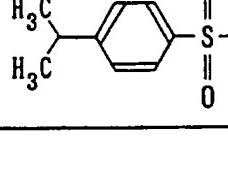
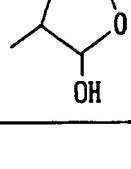
化合物番号	R <sup>1</sup>	R <sup>4</sup>	R <sup>5</sup>	R <sup>6</sup>	
211		-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H	
212		-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H	
213		-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H	
214		-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H	
215		-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H	
216		-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H	
217		-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H	

表 - 1 (つづき)

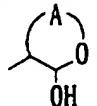
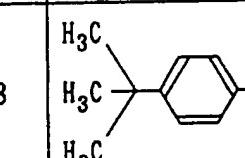
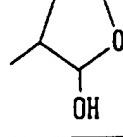
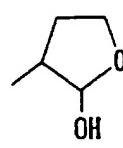
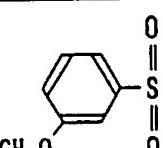
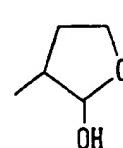
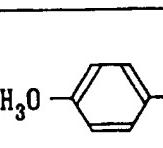
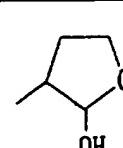
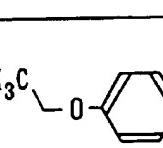
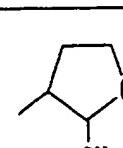
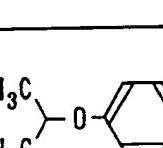
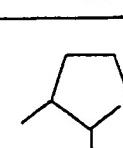
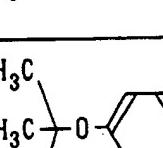
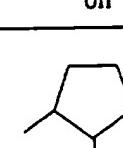
化合物番号	R <sup>1</sup>	R <sup>4</sup>	R <sup>5</sup>	R <sup>6</sup>	
218		-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H	
219		-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H	
220		-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H	
221		-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H	
222		-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H	
223		-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H	
224		-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H	

表 - 1 (つづき)

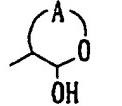
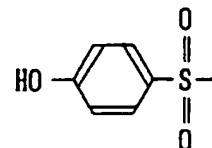
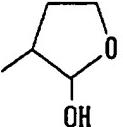
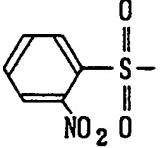
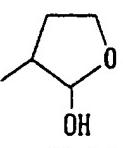
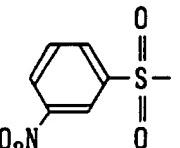
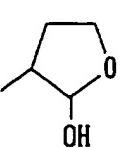
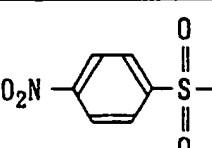
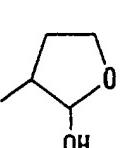
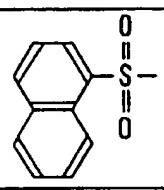
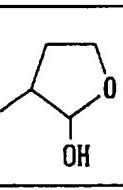
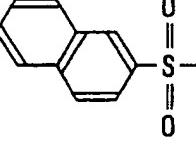
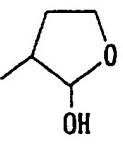
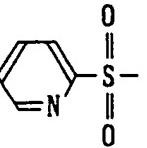
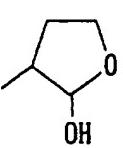
化合物番号	R <sup>1</sup>	R <sup>4</sup>	R <sup>5</sup>	R <sup>6</sup>	
225		-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H	
226		-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H	
227		-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H	
228		-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H	
229		-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H	
230		-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H	
231		-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H	

表 - 1 (つづき)

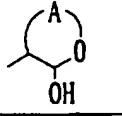
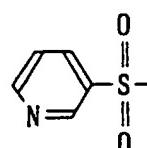
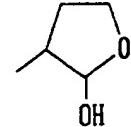
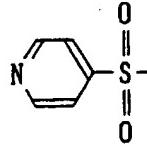
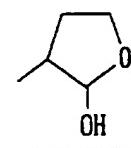
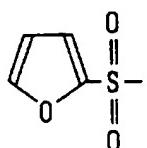
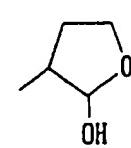
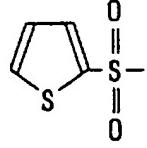
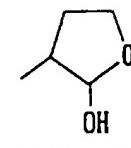
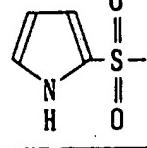
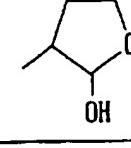
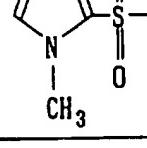
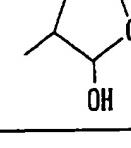
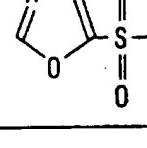
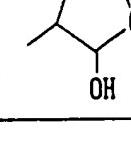
化合物番号	R <sup>1</sup>	R <sup>4</sup>	R <sup>5</sup>	R <sup>6</sup>	
232		-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H	
233		-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H	
234		-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H	
235		-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H	
236		-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H	
237		-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H	
238		-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H	

表 - 1 (つづき)

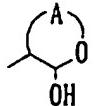
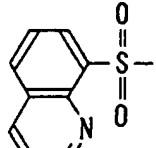
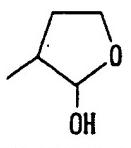
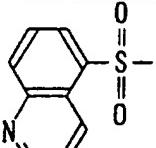
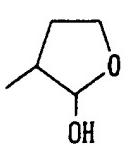
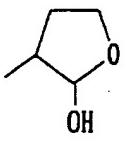
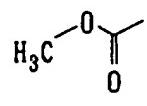
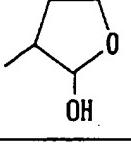
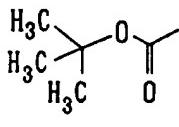
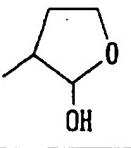
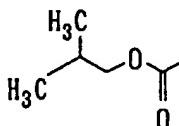
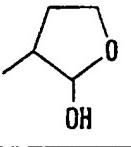
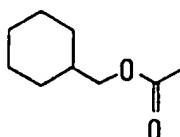
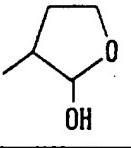
化合物 番号	R <sup>1</sup>	R <sup>4</sup>	R <sup>5</sup>	R <sup>6</sup>	
239		-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H	
240		-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H	
241	H-	-H	-CH <sub>2</sub> - 	-H	
242		-H	-CH <sub>2</sub> - 	-H	
243		-H	-CH <sub>2</sub> - 	-H	
244		-H	-CH <sub>2</sub> - 	-H	
245		-H	-CH <sub>2</sub> - 	-H	

表 - 1 (つづき)

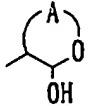
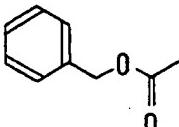
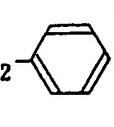
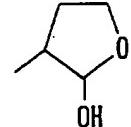
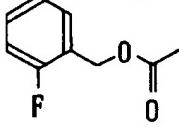
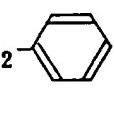
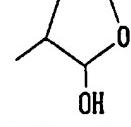
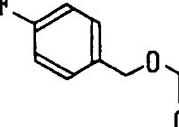
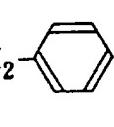
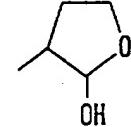
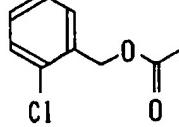
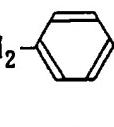
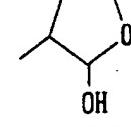
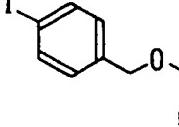
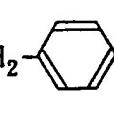
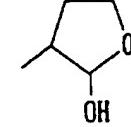
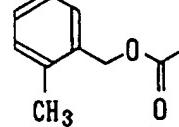
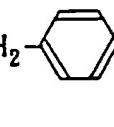
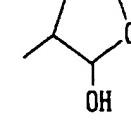
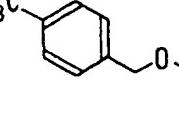
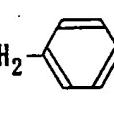
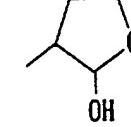
化合物番号	R <sup>1</sup>	R <sup>4</sup>	R <sup>5</sup>	R <sup>6</sup>	
246		-H	-CH <sub>2</sub> - 	-H	
247		-H	-CH <sub>2</sub> - 	-H	
248		-H	-CH <sub>2</sub> - 	-H	
249		-H	-CH <sub>2</sub> - 	-H	
250		-H	-CH <sub>2</sub> - 	-H	
251		-H	-CH <sub>2</sub> - 	-H	
252		-H	-CH <sub>2</sub> - 	-H	

表 - 1 (つづき)

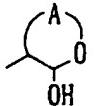
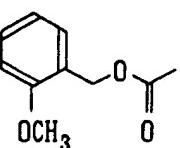
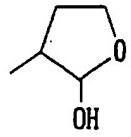
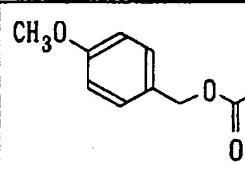
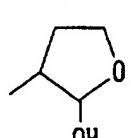
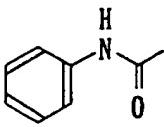
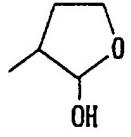
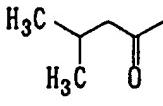
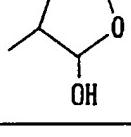
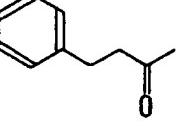
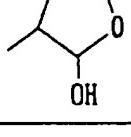
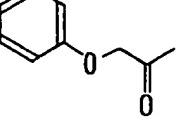
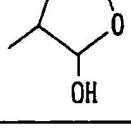
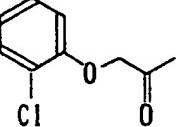
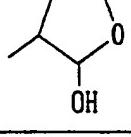
化合物番号	R <sup>1</sup>	R <sup>4</sup>	R <sup>5</sup>	R <sup>6</sup>	
253		-H	-CH <sub>2</sub> - 	-H	
254		-H	-CH <sub>2</sub> - 	-H	
255		-H	-CH <sub>2</sub> - 	-H	
256		-H	-CH <sub>2</sub> - 	-H	
257		-H	-CH <sub>2</sub> - 	-H	
258		-H	-CH <sub>2</sub> - 	-H	
259		-H	-CH <sub>2</sub> - 	-H	

表 - 1 (つづき)

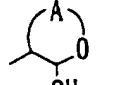
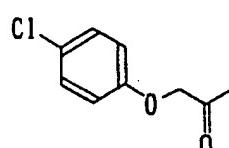
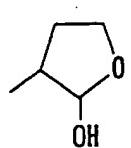
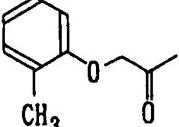
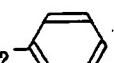
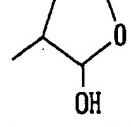
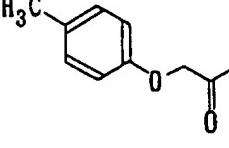
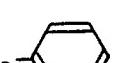
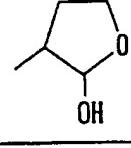
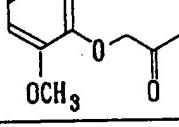
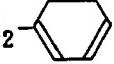
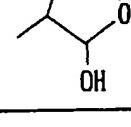
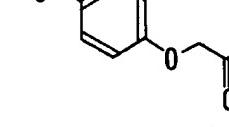
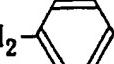
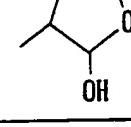
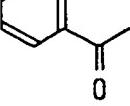
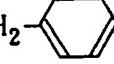
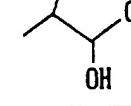
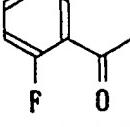
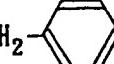
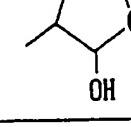
化合物 番号	R <sup>1</sup>	R <sup>4</sup>	R <sup>5</sup>	R <sup>6</sup>	
260		-H	-CH <sub>2</sub> - 	-H	
261		-H	-CH <sub>2</sub> - 	-H	
262		-H	-CH <sub>2</sub> - 	-H	
263		-H	-CH <sub>2</sub> - 	-H	
264		-H	-CH <sub>2</sub> - 	-H	
265		-H	-CH <sub>2</sub> - 	-H	
266		-H	-CH <sub>2</sub> - 	-H	

表 - 1 (つづき)

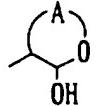
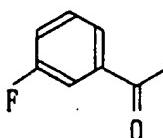
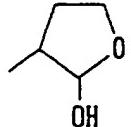
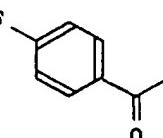
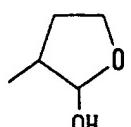
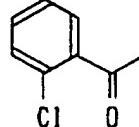
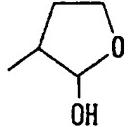
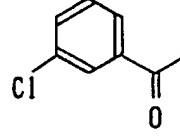
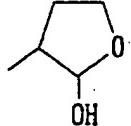
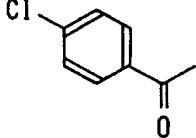
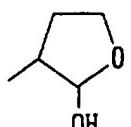
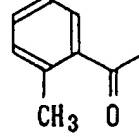
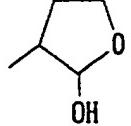
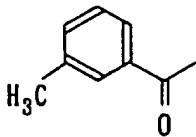
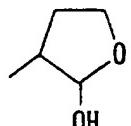
化合物番号	R <sup>1</sup>	R <sup>4</sup>	R <sup>5</sup>	R <sup>6</sup>	
267		-H	-CH <sub>2</sub> - 	-H	
268		-H	-CH <sub>2</sub> - 	-H	
269		-H	-CH <sub>2</sub> - 	-H	
270		-H	-CH <sub>2</sub> - 	-H	
271		-H	-CH <sub>2</sub> - 	-H	
272		-H	-CH <sub>2</sub> - 	-H	
273		-H	-CH <sub>2</sub> - 	-H	

表 - 1 (つづき)

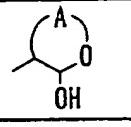
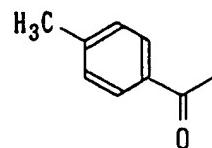
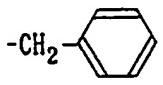
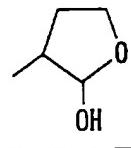
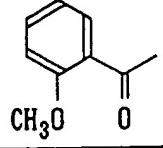
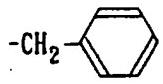
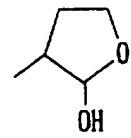
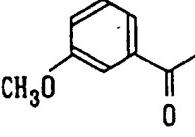
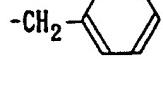
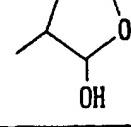
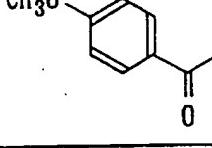
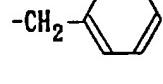
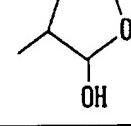
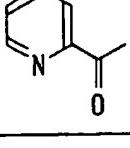
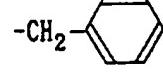
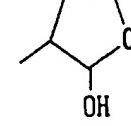
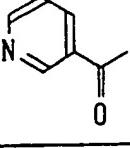
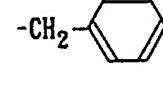
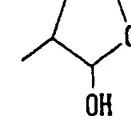
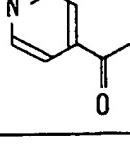
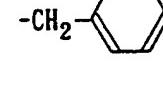
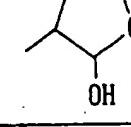
化合物 番号	R <sup>1</sup>	R <sup>4</sup>	R <sup>5</sup>	R <sup>6</sup>	
274		-H		-H	
275		-H		-H	
276		-H		-H	
277		-H		-H	
278		-H		-H	
279		-H		-H	
280		-H		-H	

表 - 1 (つづき)

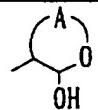
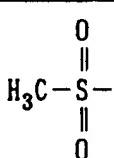
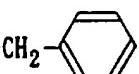
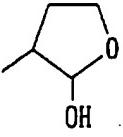
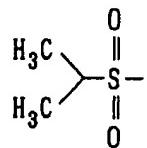
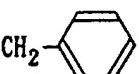
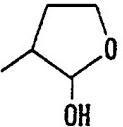
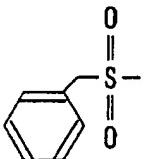
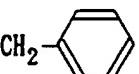
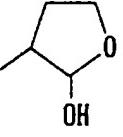
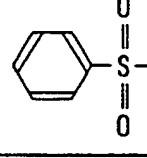
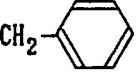
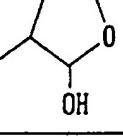
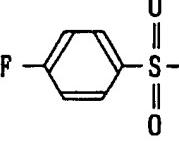
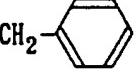
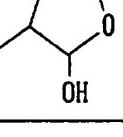
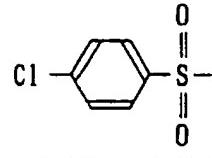
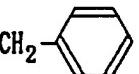
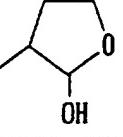
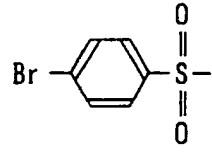
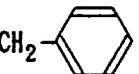
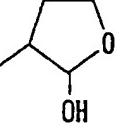
化合物 番号	R <sup>1</sup>	R <sup>4</sup>	R <sup>5</sup>	R <sup>6</sup>	
281		-H		-H	
282		-H		-H	
283		-H		-H	
284		-H		-H	
285		-H		-H	
286		-H		-H	
287		-H		-H	

表 - 1 (つづき)

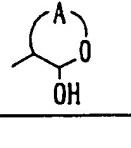
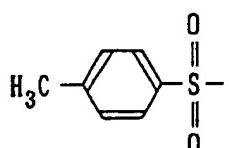
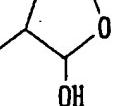
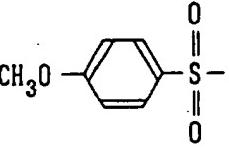
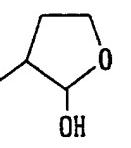
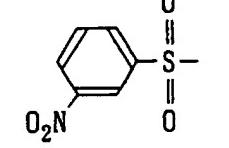
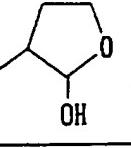
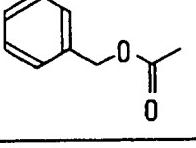
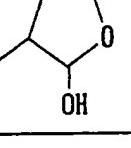
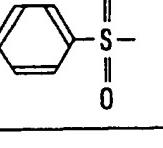
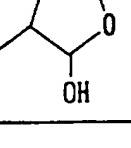
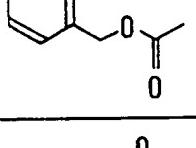
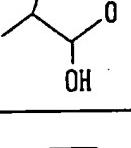
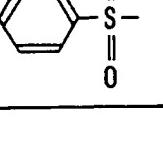
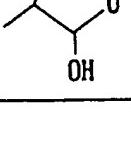
化合物 番号	R <sup>1</sup>	R <sup>4</sup>	R <sup>5</sup>	R <sup>6</sup>	
288		-H	-CH <sub>2</sub> -phenyl	-H	
289		-H	-CH <sub>2</sub> -phenyl	-H	
290		-H	-CH <sub>2</sub> -phenyl	-H	
291		-H	-CH <sub>2</sub> -phenyl	-H	
292		-H	-CH <sub>2</sub> -phenyl	-H	
293		-H	-CH <sub>2</sub> -naphthalene	-H	
294		-H	-CH <sub>2</sub> -naphthalene	-H	

表 - 1 (つづき)

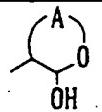
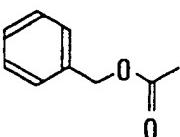
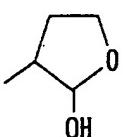
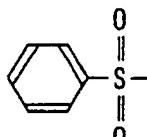
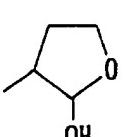
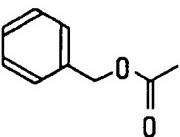
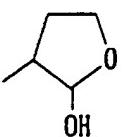
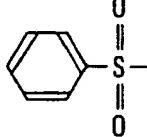
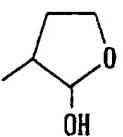
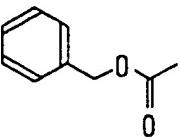
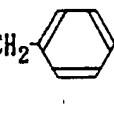
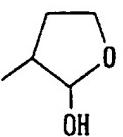
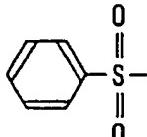
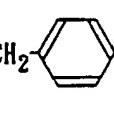
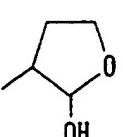
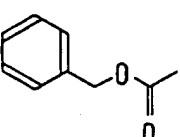
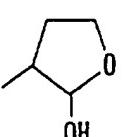
化合物番号	R <sup>1</sup>	R <sup>4</sup>	R <sup>5</sup>	R <sup>6</sup>	
295		-H	-CH <sub>2</sub> CH <sub>2</sub> SCH <sub>3</sub>	-H	
296		-H	-CH <sub>2</sub> CH <sub>2</sub> SCH <sub>3</sub>	-H	
297		-H	-CH <sub>2</sub> OC(CH <sub>3</sub> ) <sub>3</sub>	-H	
298		-H	-CH <sub>2</sub> OC(CH <sub>3</sub> ) <sub>3</sub>	-H	
299		-H	-CH <sub>2</sub> OCH <sub>2</sub> 	-H	
300		-H	-CH <sub>2</sub> OCH <sub>2</sub> 	-H	
301		-H	-CH <sub>2</sub> OH	-H	

表 - 1 (つづき)

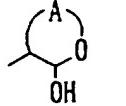
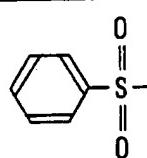
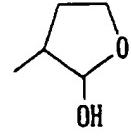
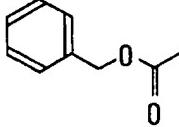
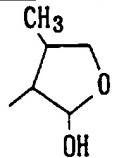
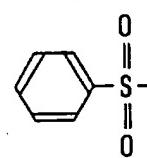
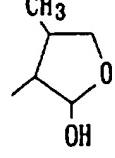
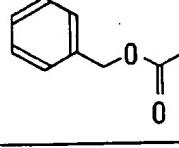
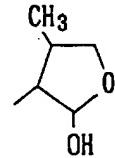
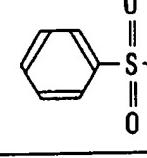
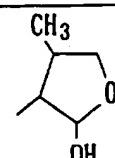
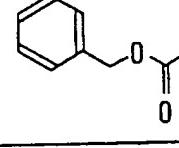
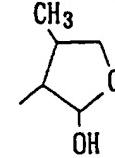
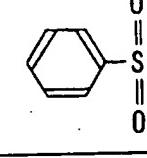
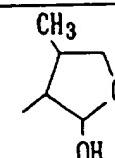
化合物 番号	R <sup>1</sup>	R <sup>4</sup>	R <sup>5</sup>	R <sup>6</sup>	
302		-H	-CH <sub>2</sub> OH	-H	
303		-H	-H	-H	
304		-H	-H	-H	
305		-H	-CH <sub>3</sub>	-H	
306		-H	-CH <sub>3</sub>	-H	
307		-H	-CH <sub>2</sub> CH <sub>2</sub> CH <sub>3</sub>	-H	
308		-H	-CH <sub>2</sub> CH <sub>2</sub> CH <sub>3</sub>	-H	

表 - 1 (つづき)

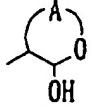
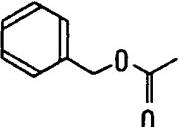
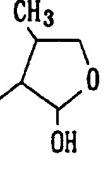
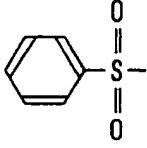
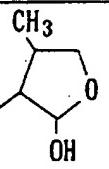
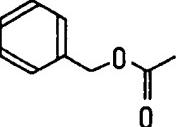
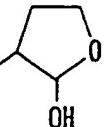
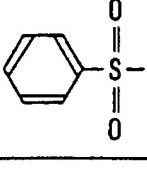
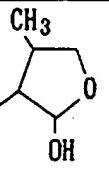
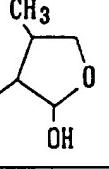
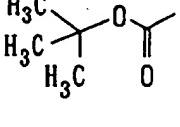
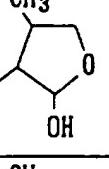
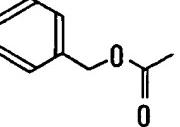
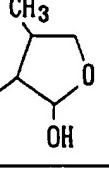
化合物番号	R <sup>1</sup>	R <sup>4</sup>	R <sup>5</sup>	R <sup>6</sup>	
309		-H	-CH(CH <sub>3</sub> ) <sub>2</sub>	-H	
310		-H	-CH(CH <sub>3</sub> ) <sub>2</sub>	-H	
311		-H	-CH <sub>2</sub> CH <sub>2</sub> CH <sub>2</sub> CH <sub>3</sub>	-H	
312		-H	-CH <sub>2</sub> CH <sub>2</sub> CH <sub>2</sub> CH <sub>3</sub>	-H	
313	H-	-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H	
314		-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H	
315		-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H	

表 - 1 (つづき)

化合物 番号	R <sup>1</sup>	R <sup>4</sup>	R <sup>5</sup>	R <sup>6</sup>	
316		-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H	
317		-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H	
318		-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H	
319		-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H	
320		-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H	
321		-H	-CH <sub>2</sub> -	-H	
322		-H	-CH <sub>2</sub> -	-H	

表 - 1 (つづき)

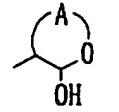
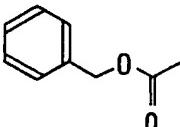
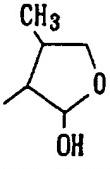
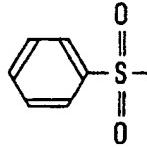
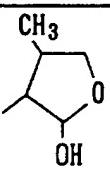
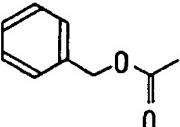
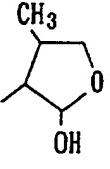
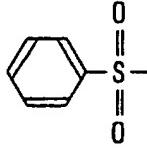
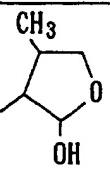
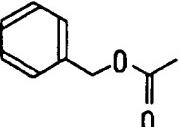
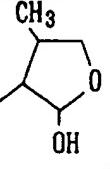
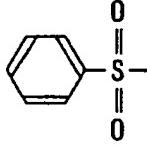
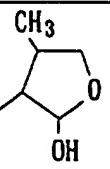
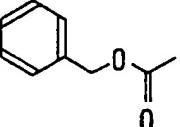
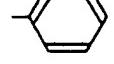
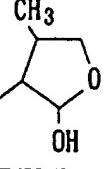
化合物 番号	R <sup>1</sup>	R <sup>4</sup>	R <sup>5</sup>	R <sup>6</sup>	
323		-H	-CH <sub>2</sub> CH <sub>2</sub> SCH <sub>3</sub>	-H	
324		-H	-CH <sub>2</sub> CH <sub>2</sub> SCH <sub>3</sub>	-H	
325		-H	-CH <sub>2</sub> OC(CH <sub>3</sub> ) <sub>3</sub>	-H	
326		-H	-CH <sub>2</sub> OC(CH <sub>3</sub> ) <sub>3</sub>	-H	
327		-H	-CH <sub>2</sub> OH	-H	
328		-H	-CH <sub>2</sub> OH	-H	
329		-H		-H	

表 - 1 (つづき)

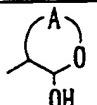
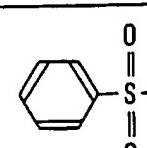
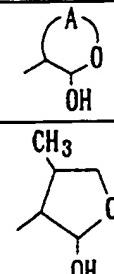
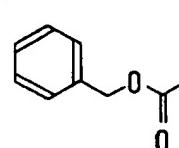
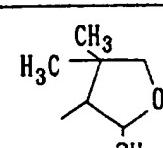
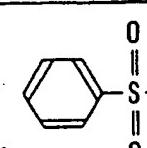
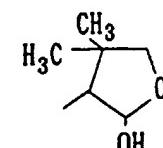
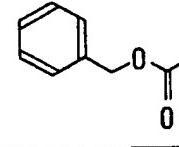
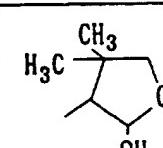
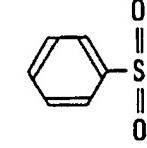
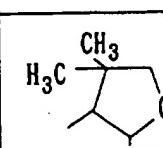
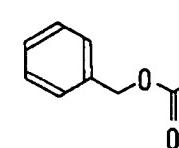
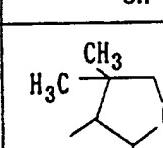
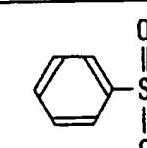
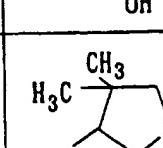
化合物 番号	R <sup>1</sup>	R <sup>4</sup>	R <sup>5</sup>	R <sup>6</sup>	
330		-H		-H	
331		-H	-H	-H	
332		-H	-H	-H	
333		-H	-CH <sub>3</sub>	-H	
334		-H	-CH <sub>3</sub>	-H	
335		-H	-CH <sub>2</sub> CH <sub>2</sub> CH <sub>3</sub>	-H	
336		-H	-CH <sub>2</sub> CH <sub>2</sub> CH <sub>3</sub>	-H	

表 - 1 (つづき)

化合物番号	R <sup>1</sup>	R <sup>4</sup>	R <sup>5</sup>	R <sup>6</sup>	
337		-H	-CH(CH <sub>3</sub> ) <sub>2</sub>	-H	
338		-H	-CH(CH <sub>3</sub> ) <sub>2</sub>	-H	
339		-H	-CH <sub>2</sub> CH <sub>2</sub> CH <sub>2</sub> CH <sub>3</sub>	-H	
340		-H	-CH <sub>2</sub> CH <sub>2</sub> CH <sub>2</sub> CH <sub>3</sub>	-H	
341	H-	-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H	
342		-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H	
343		-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H	

表 - 1 (つづき)

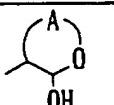
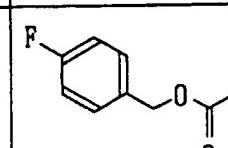
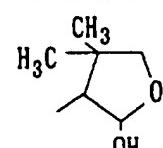
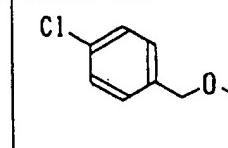
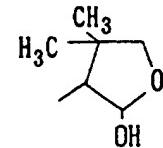
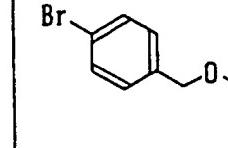
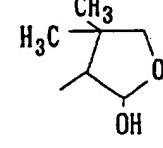
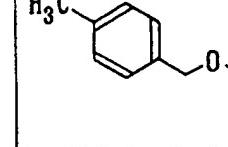
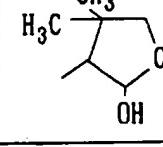
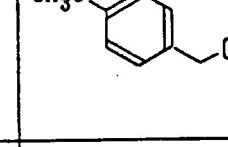
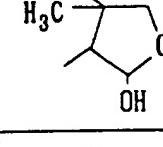
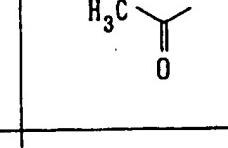
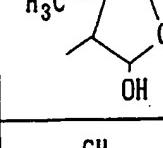
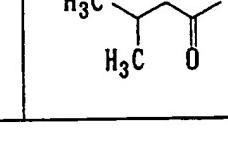
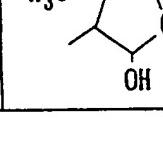
化合物 番号	R <sup>1</sup>	R <sup>4</sup>	R <sup>5</sup>	R <sup>6</sup>	
344		-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H	
345		-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H	
346		-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H	
347		-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H	
348		-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H	
349		-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H	
350		-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H	

表 - 1 (つづき)

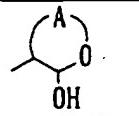
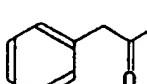
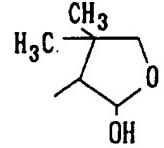
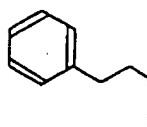
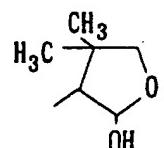
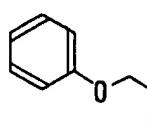
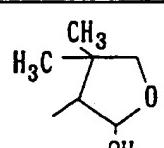
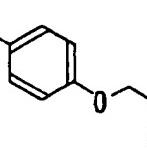
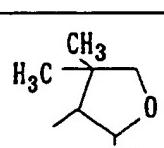
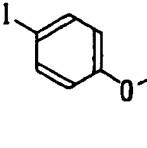
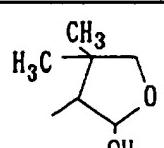
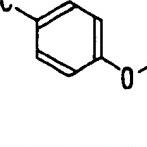
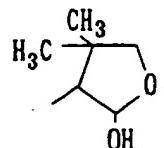
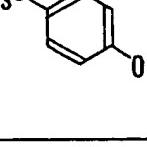
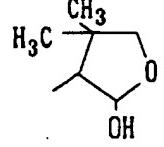
化合物 番号	R <sup>1</sup>	R <sup>4</sup>	R <sup>5</sup>	R <sup>6</sup>	
351		-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H	
352		-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H	
353		-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H	
354		-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H	
355		-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H	
356		-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H	
357		-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H	

表 - 1 (つづき)

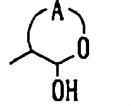
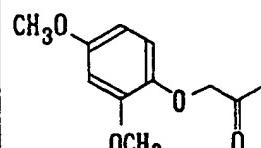
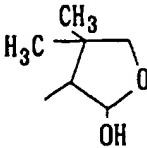
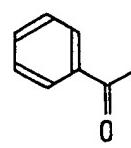
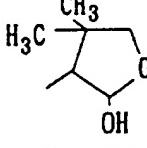
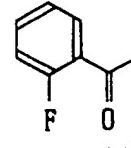
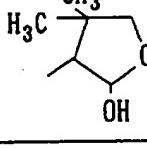
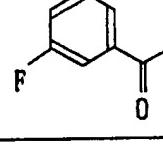
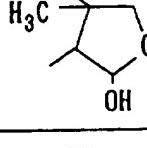
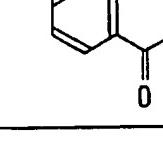
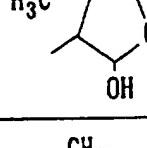
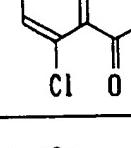
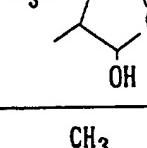
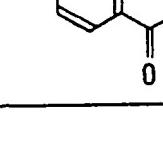
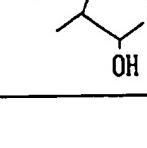
化合物番号	R <sup>1</sup>	R <sup>4</sup>	R <sup>5</sup>	R <sup>6</sup>	
358		-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H	
359		-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H	
360		-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H	
361		-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H	
362		-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H	
363		-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H	
364		-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H	

表 - 1 (つづき)

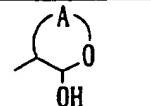
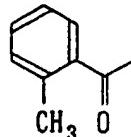
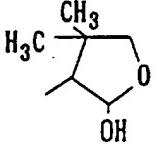
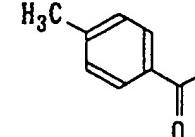
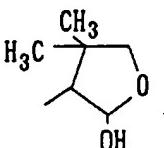
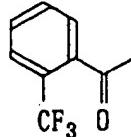
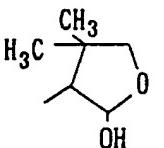
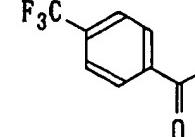
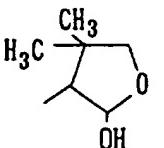
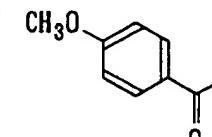
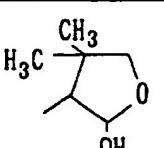
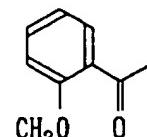
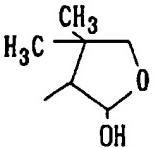
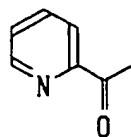
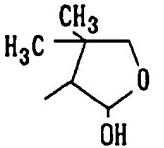
化合物番号	R <sup>1</sup>	R <sup>4</sup>	R <sup>5</sup>	R <sup>6</sup>	
365		-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H	
366		-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H	
367		-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H	
368		-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H	
369		-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H	
370		-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H	
371		-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H	

表 - 1 (つづき)

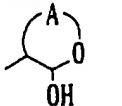
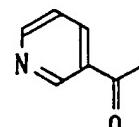
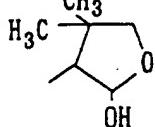
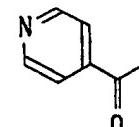
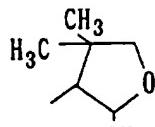
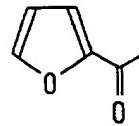
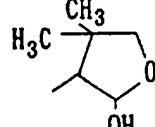
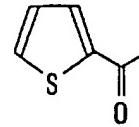
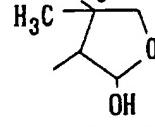
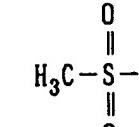
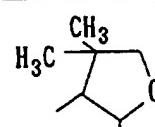
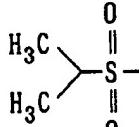
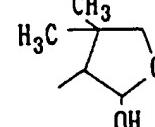
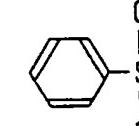
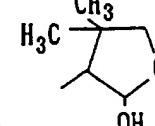
化合物 番号	R <sup>1</sup>	R <sup>4</sup>	R <sup>5</sup>	R <sup>6</sup>	
372		-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H	
373		-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H	
374		-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H	
375		-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H	
376		-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H	
377		-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H	
378		-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H	

表 - 1 (つづき)

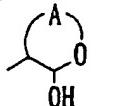
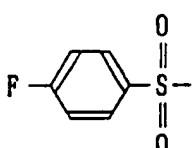
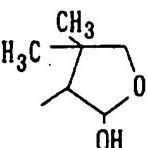
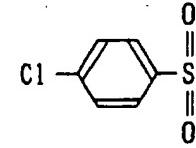
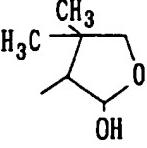
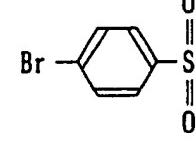
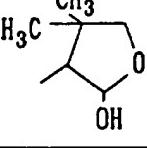
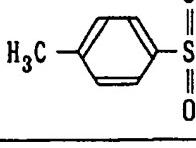
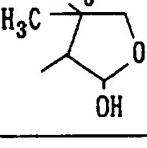
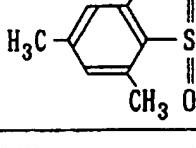
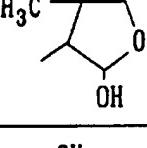
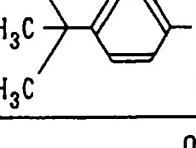
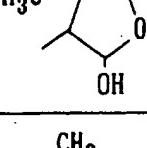
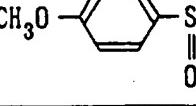
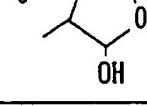
化合物番号	R <sup>1</sup>	R <sup>4</sup>	R <sup>5</sup>	R <sup>6</sup>	
379		-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H	
380		-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H	
381		-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H	
382		-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H	
383		-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H	
384		-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H	
385		-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H	

表 - 1 (つづき)

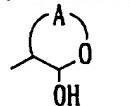
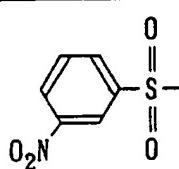
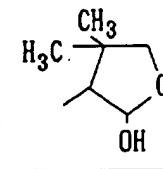
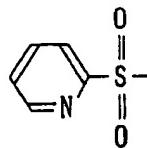
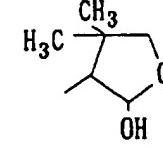
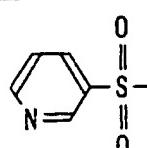
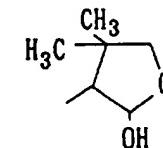
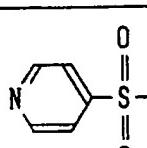
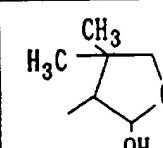
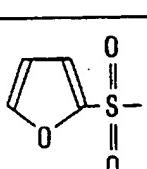
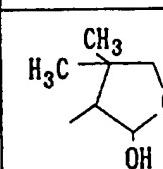
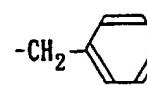
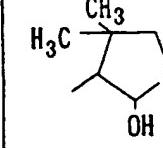
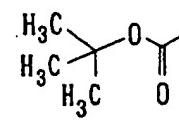
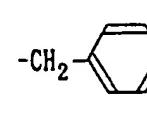
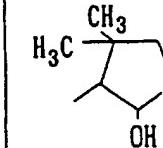
化合物 番号	R <sup>1</sup>	R <sup>4</sup>	R <sup>5</sup>	R <sup>6</sup>	
386		-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H	
387		-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H	
388		-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H	
389		-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H	
390		-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H	
391	H-	-H	-CH <sub>2</sub> - 	-H	
392		-H	-CH <sub>2</sub> - 	-H	

表 - 1 (つづき)

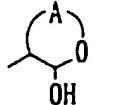
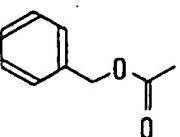
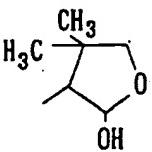
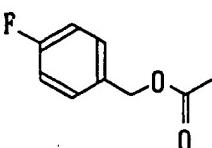
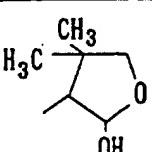
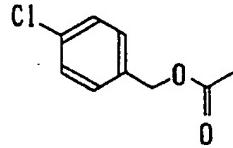
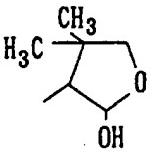
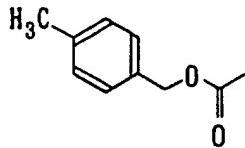
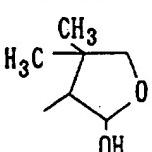
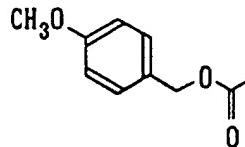
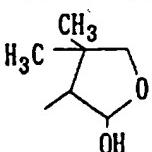
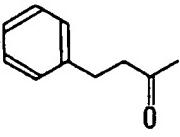
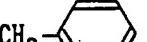
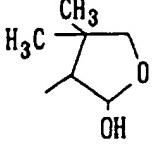
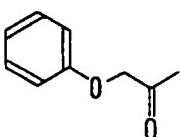
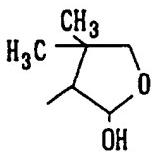
化合物番号	R <sup>1</sup>	R <sup>4</sup>	R <sup>5</sup>	R <sup>6</sup>	
393		-H	-CH <sub>2</sub> - 	-H	
394		-H	-CH <sub>2</sub> - 	-H	
395		-H	-CH <sub>2</sub> - 	-H	
396		-H	-CH <sub>2</sub> - 	-H	
397		-H	-CH <sub>2</sub> - 	-H	
398		-H	-CH <sub>2</sub> - 	-H	
399		-H	-CH <sub>2</sub> - 	-H	

表 - 1 (つづき)

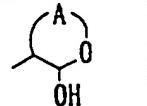
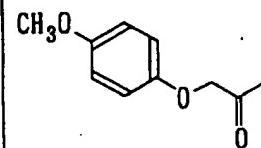
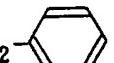
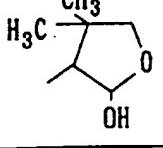
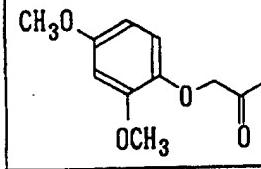
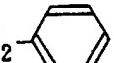
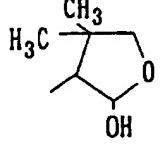
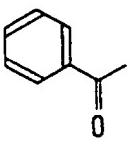
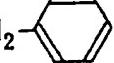
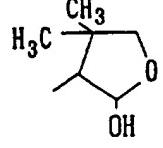
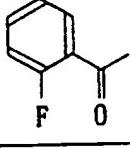
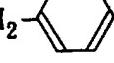
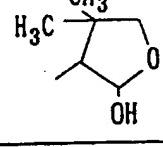
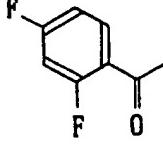
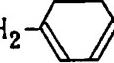
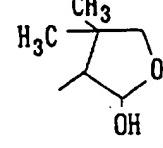
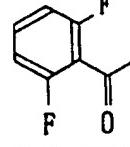
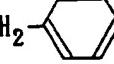
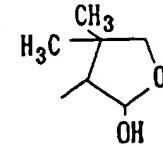
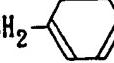
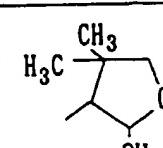
化合物 番号	R <sub>1</sub>	R <sub>4</sub>	R <sub>5</sub>	R <sub>6</sub>	
400		-H	-CH <sub>2</sub> - 	-H	
401		-H	-CH <sub>2</sub> - 	-H	
402		-H	-CH <sub>2</sub> - 	-H	
403		-H	-CH <sub>2</sub> - 	-H	
404		-H	-CH <sub>2</sub> - 	-H	
405		-H	-CH <sub>2</sub> - 	-H	
406		-H	-CH <sub>2</sub> - 	-H	

表 - 1 (つづき)

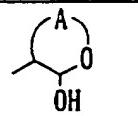
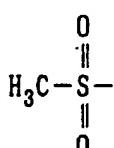
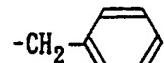
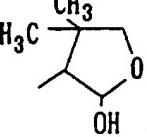
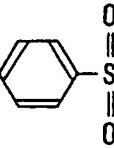
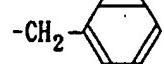
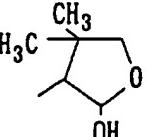
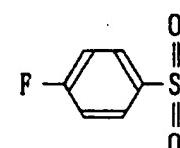
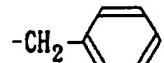
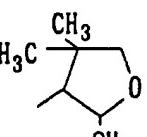
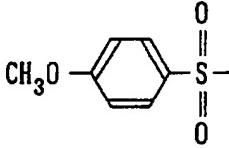
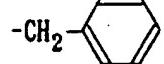
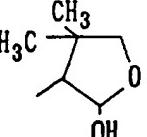
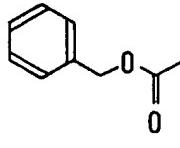
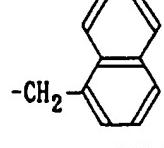
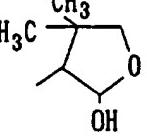
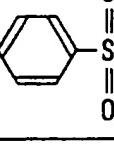
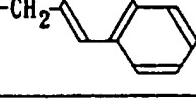
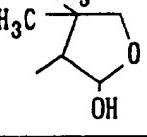
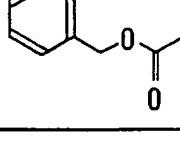
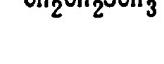
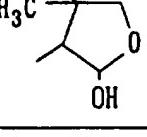
化合物 番号	R <sup>1</sup>	R <sup>4</sup>	R <sup>5</sup>	R <sup>6</sup>	
407		-H		-H	
408		-H		-H	
409		-H		-H	
410		-H		-H	
411		-H		-H	
412		-H		-H	
413		-H		-H	

表 - 1 (つづき)

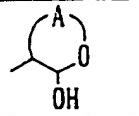
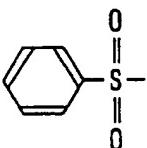
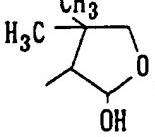
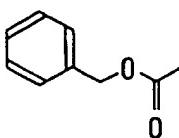
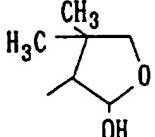
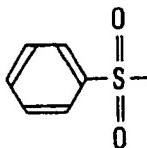
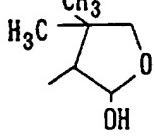
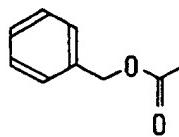
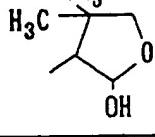
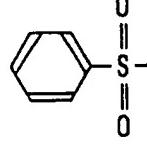
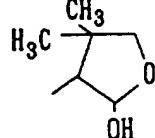
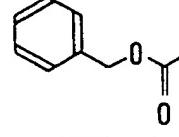
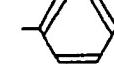
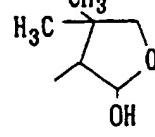
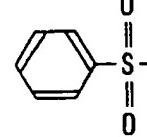
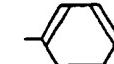
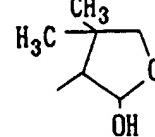
化合物 番号	R <sup>1</sup>	R <sup>4</sup>	R <sup>5</sup>	R <sup>6</sup>	
414		-H	-CH <sub>2</sub> CH <sub>2</sub> SCH <sub>3</sub>	-H	
415		-H	-CH <sub>2</sub> OC(CH <sub>3</sub> ) <sub>3</sub>	-H	
416		-H	-CH <sub>2</sub> OC(CH <sub>3</sub> ) <sub>3</sub>	-H	
417		-H	-CH <sub>2</sub> OH	-H	
418		-H	-CH <sub>2</sub> OH	-H	
419		-H		-H	
420		-H		-H	

表 - 1 (つづき)

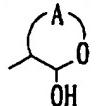
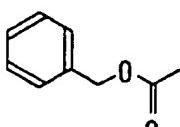
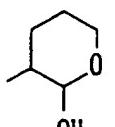
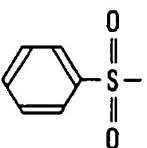
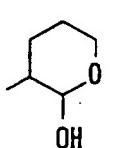
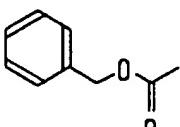
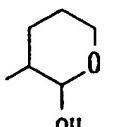
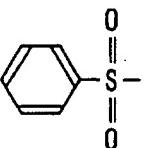
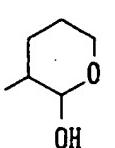
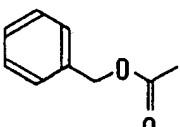
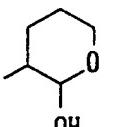
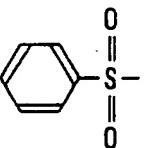
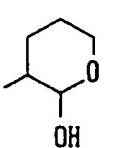
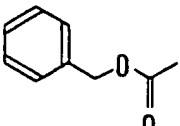
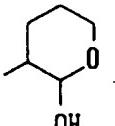
化合物番号	R <sup>1</sup>	R <sup>4</sup>	R <sup>5</sup>	R <sup>6</sup>	
421		-H	-H	-H	
422		-H	-H	-H	
423		-H	-CH <sub>3</sub>	-H	
424		-H	-CH <sub>3</sub>	-H	
425		-H	-CH <sub>2</sub> CH <sub>2</sub> CH <sub>3</sub>	-H	
426		-H	-CH <sub>2</sub> CH <sub>2</sub> CH <sub>3</sub>	-H	
427		-H	-CH(CH <sub>3</sub> ) <sub>2</sub>	-H	

表 - 1 (つづき)

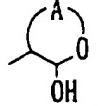
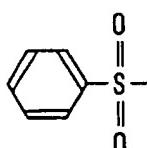
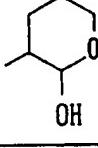
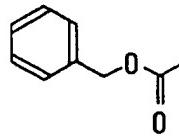
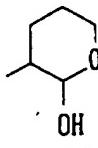
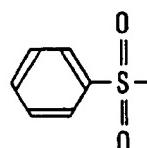
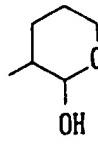
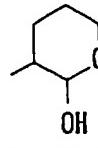
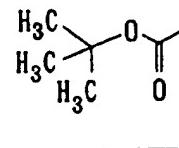
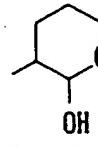
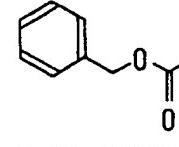
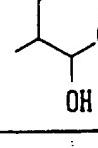
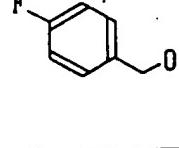
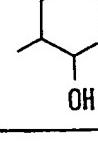
化合物 番号	R <sup>1</sup>	R <sup>4</sup>	R <sup>5</sup>	R <sup>6</sup>	
428		-H	-CH(CH <sub>3</sub> ) <sub>2</sub>	-H	
429		-H	-CH <sub>2</sub> CH <sub>2</sub> CH <sub>2</sub> CH <sub>3</sub>	-H	
430		-H	-CH <sub>2</sub> CH <sub>2</sub> CH <sub>2</sub> CH <sub>3</sub>	-H	
431	-H	-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H	
432		-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H	
433		-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H	
434		-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H	

表 - 1 (つづき)

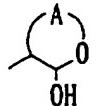
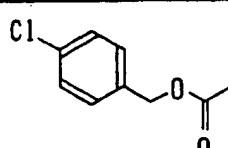
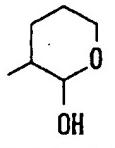
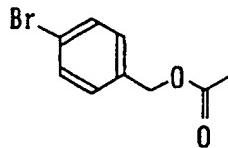
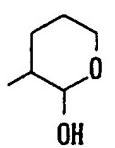
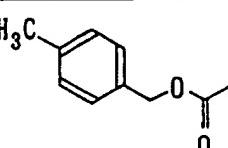
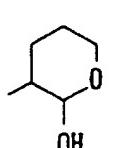
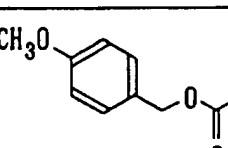
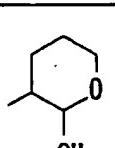
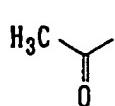
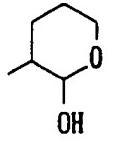
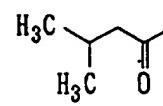
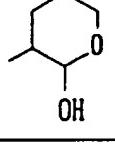
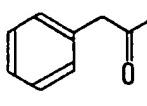
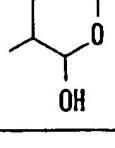
化合物 番号	R <sup>1</sup>	R <sup>4</sup>	R <sup>5</sup>	R <sup>6</sup>	
435		-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H	
436		-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H	
437		-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H	
438		-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H	
439		-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H	
440		-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H	
441		-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H	

表 - 1 (つづき)

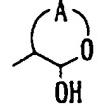
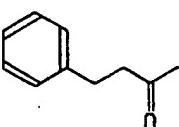
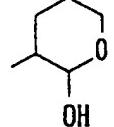
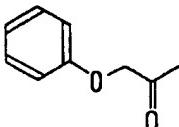
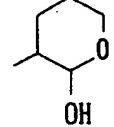
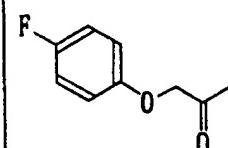
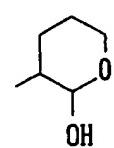
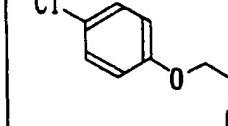
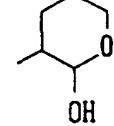
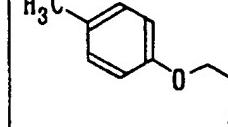
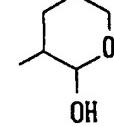
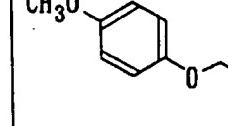
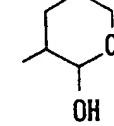
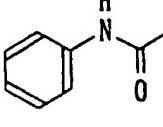
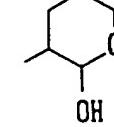
化合物番号	R <sup>1</sup>	R <sup>4</sup>	R <sup>5</sup>	R <sup>6</sup>	
442		-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H	
443		-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H	
444		-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H	
445		-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H	
446		-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H	
447		-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H	
448		-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H	

表 - 1 (つづき)

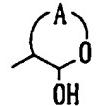
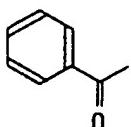
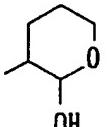
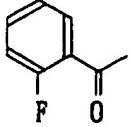
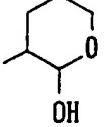
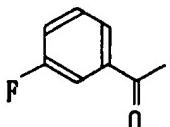
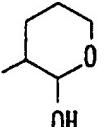
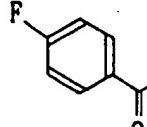
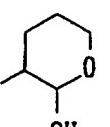
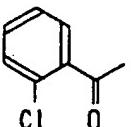
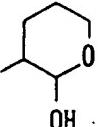
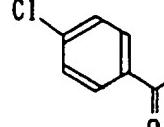
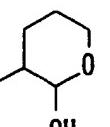
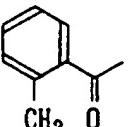
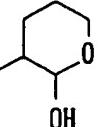
化合物 番号	R <sup>1</sup>	R <sup>4</sup>	R <sup>5</sup>	R <sup>6</sup>	
449		-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H	
450		-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H	
451		-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H	
452		-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H	
453		-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H	
454		-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H	
455		-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H	

表 - 1 (つづき)

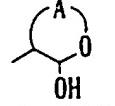
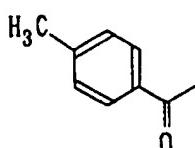
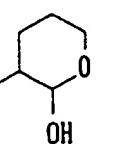
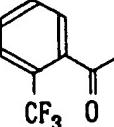
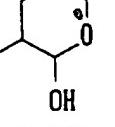
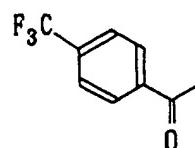
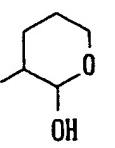
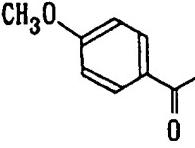
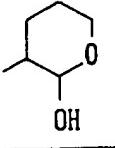
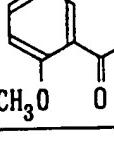
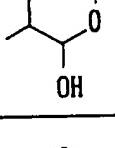
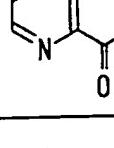
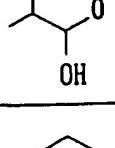
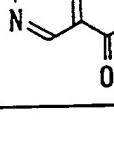
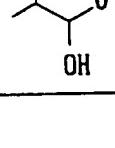
化合物 番号	R <sup>1</sup>	R <sup>4</sup>	R <sup>5</sup>	R <sup>6</sup>	
456		-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H	
457		-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H	
458		-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H	
459		-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H	
460		-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H	
461		-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H	
462		-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H	

表 - 1 (つづき)

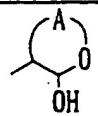
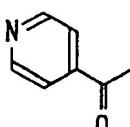
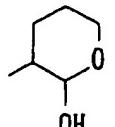
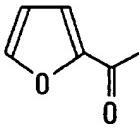
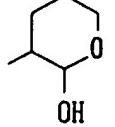
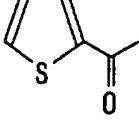
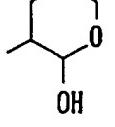
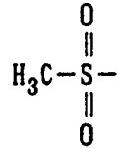
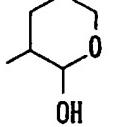
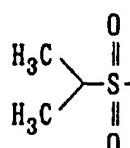
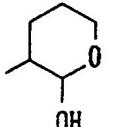
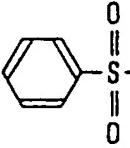
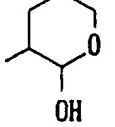
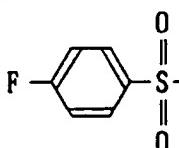
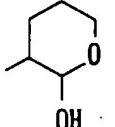
化合物 番号	R <sup>1</sup>	R <sup>4</sup>	R <sup>5</sup>	R <sup>6</sup>	
463		-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H	
464		-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H	
465		-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H	
466		-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H	
467		-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H	
468		-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H	
469		-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H	

表 - 1 (つづき)

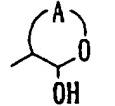
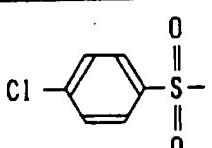
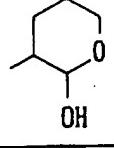
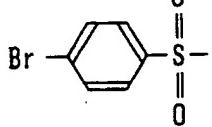
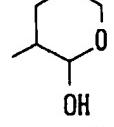
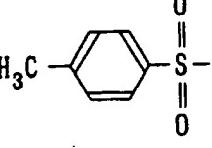
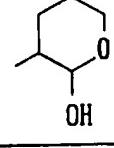
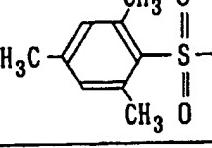
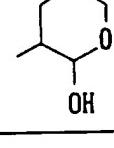
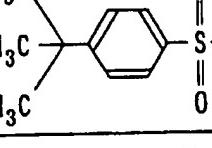
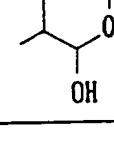
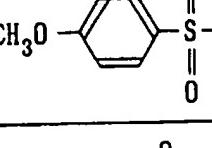
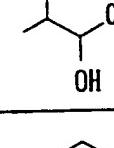
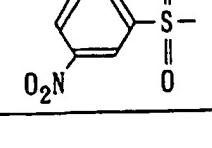
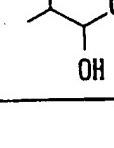
化合物番号	R <sub>1</sub>	R <sub>4</sub>	R <sub>5</sub>	R <sub>6</sub>	
470		-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H	
471		-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H	
472		-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H	
473		-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H	
474		-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H	
475		-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H	
476		-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H	

表 - 1 (つづき)

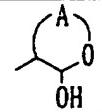
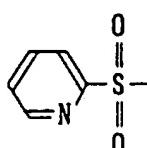
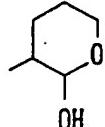
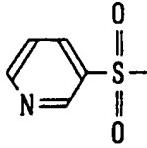
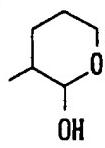
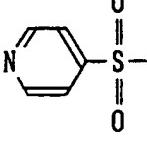
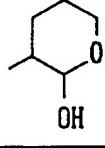
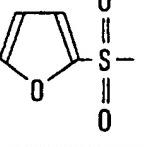
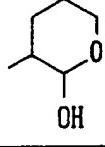
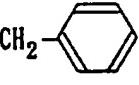
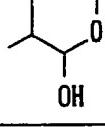
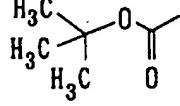
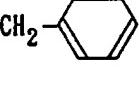
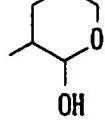
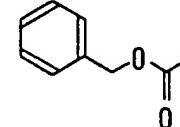
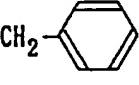
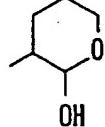
化合物 番号	R <sup>1</sup>	R <sup>4</sup>	R <sup>5</sup>	R <sup>6</sup>	
477		-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H	
478		-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H	
479		-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H	
480		-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H	
481	H-	-H	-CH <sub>2</sub> - 	-H	
482		-H	-CH <sub>2</sub> - 	-H	
483		-H	-CH <sub>2</sub> - 	-H	

表 - 1 (つづき)

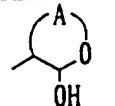
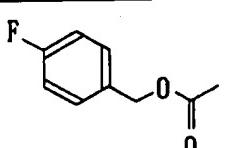
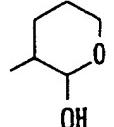
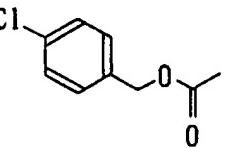
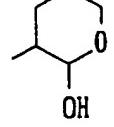
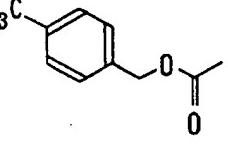
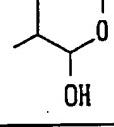
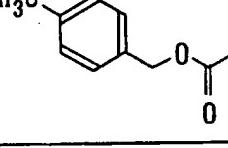
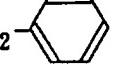
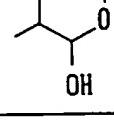
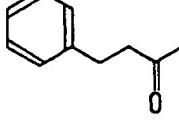
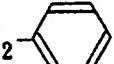
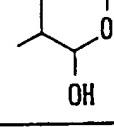
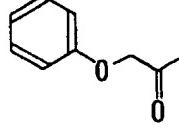
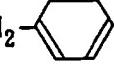
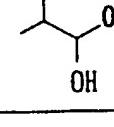
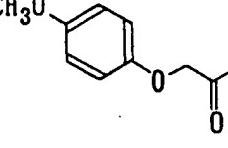
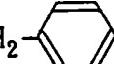
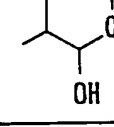
化合物 番号	R <sup>1</sup>	R <sup>4</sup>	R <sup>5</sup>	R <sup>6</sup>	
484		-H	-CH <sub>2</sub> - 	-H	
485		-H	-CH <sub>2</sub> - 	-H	
486		-H	-CH <sub>2</sub> - 	-H	
487		-H	-CH <sub>2</sub> - 	-H	
488		-H	-CH <sub>2</sub> - 	-H	
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表 - 1 (つづき)

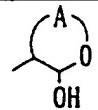
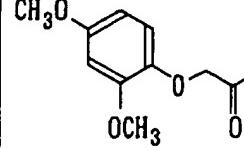
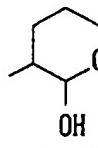
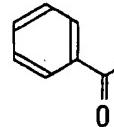
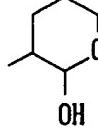
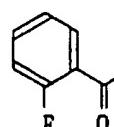
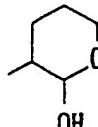
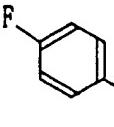
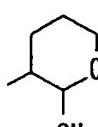
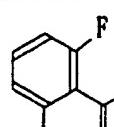
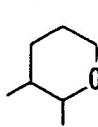
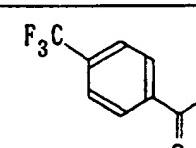
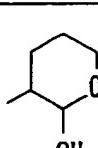
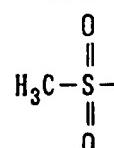
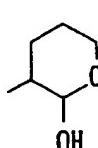
化合物番号	R <sup>1</sup>	R <sup>4</sup>	R <sup>5</sup>	R <sup>6</sup>	
491		-H	-CH <sub>2</sub> - 	-H	
492		-H	-CH <sub>2</sub> - 	-H	
493		-H	-CH <sub>2</sub> - 	-H	
494		-H	-CH <sub>2</sub> - 	-H	
495		-H	-CH <sub>2</sub> - 	-H	
496		-H	-CH <sub>2</sub> - 	-H	
497		-H	-CH <sub>2</sub> - 	-H	

表 - 1 (つづき)

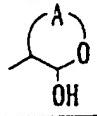
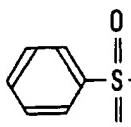
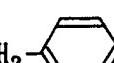
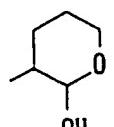
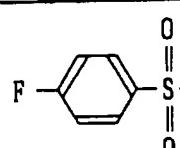
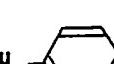
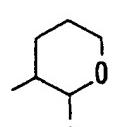
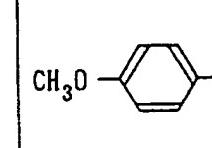
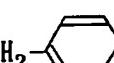
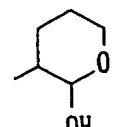
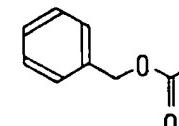
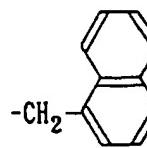
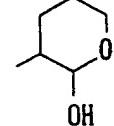
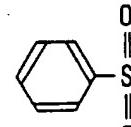
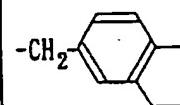
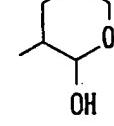
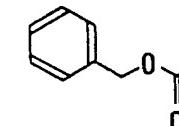
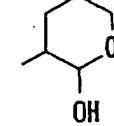
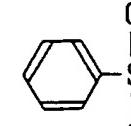
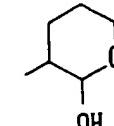
化合物 番号	R <sup>1</sup>	R <sup>4</sup>	R <sup>5</sup>	R <sup>6</sup>	
498		-H	-CH <sub>2</sub> - 	-H	
499		-H	-CH <sub>2</sub> - 	-H	
500		-H	-CH <sub>2</sub> - 	-H	
501		-H	-CH <sub>2</sub> - 	-H	
502		-H	-CH <sub>2</sub> - 	-H	
503		-H	-CH <sub>2</sub> CH <sub>2</sub> SCH <sub>3</sub>	-H	
504		-H	-CH <sub>2</sub> CH <sub>2</sub> SCH <sub>3</sub>	-H	

表 - 1 (つづき)

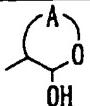
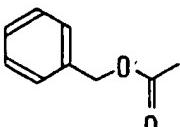
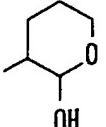
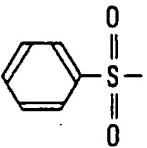
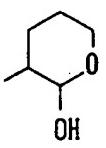
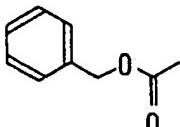
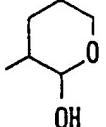
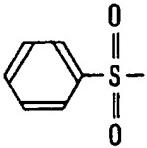
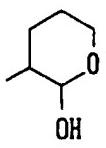
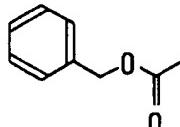
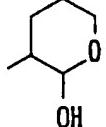
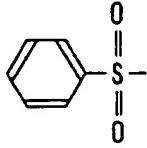
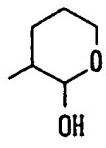
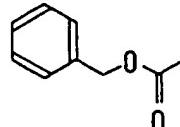
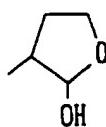
化合物番号	R <sup>1</sup>	R <sup>4</sup>	R <sup>5</sup>	R <sup>6</sup>	
505		-H	-CH <sub>2</sub> OC(CH <sub>3</sub> ) <sub>3</sub>	-H	
506		-H	-CH <sub>2</sub> OC(CH <sub>3</sub> ) <sub>3</sub>	-H	
507		-H	-CH <sub>2</sub> OH	-H	
508		-H	-CH <sub>2</sub> OH	-H	
509		-H		-H	
510		-H		-H	
511		-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-CH <sub>3</sub> CO	

表 - 1 (つづき)

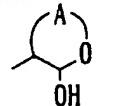
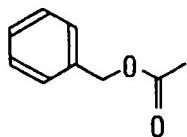
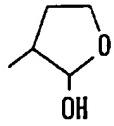
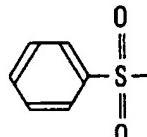
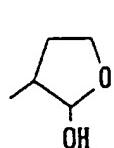
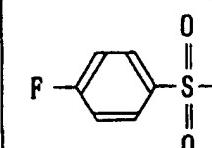
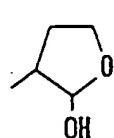
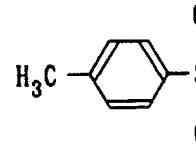
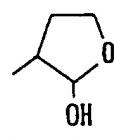
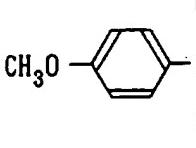
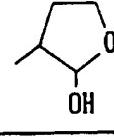
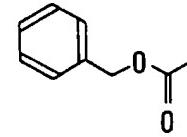
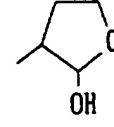
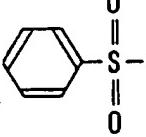
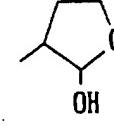
化合物 番号	R <sup>1</sup>	R <sup>4</sup>	R <sup>5</sup>	R <sup>6</sup>	
512		CH <sub>3</sub> CO-	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H	
513		CH <sub>3</sub> CO-	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H	
514		CH <sub>3</sub> CO-	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H	
515		CH <sub>3</sub> CO-	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H	
516		CH <sub>3</sub> CO-	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H	
517		CH <sub>3</sub> CO-	-CH <sub>2</sub> - 	-H	
518		CH <sub>3</sub> CO-	-CH <sub>2</sub> - 	-H	

表 - 1 (つづき)

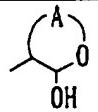
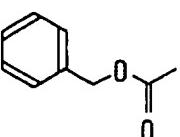
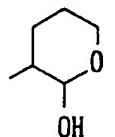
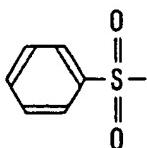
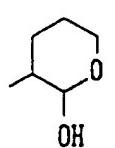
化合物番号	R <sup>1</sup>	R <sup>4</sup>	R <sup>5</sup>	R <sup>6</sup>	
519		CH <sub>3</sub> CO-	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H	
520		CH <sub>3</sub> CO-	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H	

表 - 2 (n = 0 の場合)

化合物 番号	R <sup>1</sup>	R <sup>4</sup>	R <sup>5</sup>	R <sup>6</sup>	R <sup>7</sup>	A
521		-H	-H	-H		
522		-H	-CH <sub>3</sub>	-H		
523		-H	-CH <sub>2</sub> CH <sub>2</sub> CH <sub>3</sub>	-H		
524		-H	-CH(CH <sub>3</sub> ) <sub>2</sub>	-H		

表 - 2 (つづき)

化合物番号	R <sup>1</sup>	R <sup>4</sup>	R <sup>5</sup>	R <sup>6</sup>	R <sup>7</sup>	
525		-H	-CH <sub>2</sub> CH <sub>2</sub> CH <sub>2</sub> CH <sub>3</sub>	-H		
526	H-	-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H		
527		-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H		
528		-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H		

表 - 2 (つづき)

化合物 番号	R <sup>1</sup>	R <sup>4</sup>	R <sup>5</sup>	R <sup>6</sup>	R <sup>7</sup>	A
529		-H		-H		
530		-H		-H		
531		-H		-H		
532				-H		

表 - 2 (つづき)

化合物番号	R <sup>1</sup>	R <sup>4</sup>	R <sup>5</sup>	R <sup>6</sup>	R <sup>7</sup>
533		-H		-H	
534		-H		-H	
535			-H		-H
536					

表 - 2 (つづき)

化合物 番号	R <sup>1</sup>	R <sup>4</sup>	R <sup>5</sup>	R <sup>6</sup>	R <sup>7</sup>	
537		-H	-H			
538		-H	-CH <sub>3</sub>	-H		
539		-H	-H	-CH <sub>3</sub>		
540		-H	-CH <sub>2</sub> CH <sub>2</sub> CH <sub>3</sub>	-H		

表 - 2 (つづき)

化合物番号	R <sup>1</sup>	R <sup>4</sup>	R <sup>5</sup>	R <sup>6</sup>	R <sup>7</sup>
541		-H	$-\text{CH}(\text{CH}_3)_2$	-H	
542		-H	$-\text{CH}_2\text{CH}_2\text{CH}_2\text{CH}_3$	-H	
543		-H	$-\text{CH}(\text{CH}_3)\text{CH}_2\text{CH}_3$	-H	
544	H-	-H	$-\text{CH}_2\text{CH}(\text{CH}_3)_2$	-H	

表 - 2 (つづき)

化合物番号	R <sup>1</sup>	R <sup>4</sup>	R <sup>5</sup>	R <sup>6</sup>	R <sup>7</sup>
545	$\text{H}_3\text{C}-\overset{\text{O}}{\underset{\text{C}}{\text{O}}} \text{C}$	-H	$-\text{CH}_2\text{CH}(\text{CH}_3)_2$	-H	$\text{CH}_3-\overset{\text{O}}{\underset{\text{C}}{\text{O}}} \text{C}$
546	$\text{H}_3\text{C}-\overset{\text{O}}{\underset{\text{C}}{\text{O}}} \text{C}$	-H	$-\text{CH}_2\text{CH}(\text{CH}_3)_2$	-H	$\text{CH}_3-\overset{\text{O}}{\underset{\text{C}}{\text{O}}} \text{C}$
547	$\begin{matrix} \text{H}_3\text{C} & \\ & \diagdown \\ & \text{H}_3\text{C} \\ & \diagup \\ & \text{H}_3\text{C} \end{matrix}$	-H	$-\text{CH}_2\text{CH}(\text{CH}_3)_2$	-H	$\text{CH}_3-\overset{\text{O}}{\underset{\text{C}}{\text{O}}} \text{C}$
548	$\begin{matrix} \text{H}_3\text{C} & \\ & \diagdown \\ & \text{H}_3\text{C} \\ & \diagup \\ & \text{H}_3\text{C} \end{matrix}$	-H	$-\text{CH}_2\text{CH}(\text{CH}_3)_2$	-H	$\text{CH}_3-\overset{\text{O}}{\underset{\text{C}}{\text{O}}} \text{C}$

1 0 1

表 - 2 (つづき)

化合物 番号	R <sup>1</sup>	R <sup>4</sup>	R <sup>5</sup>	R <sup>6</sup>	R <sup>7</sup>	残基
549		-H				
550		-H		-H		
551		-H		-H		
552		-CH <sub>3</sub>		-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H	

表 - 2 (つづき)

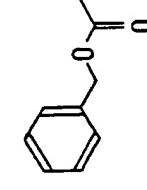
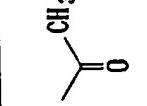
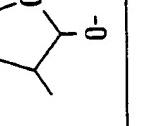
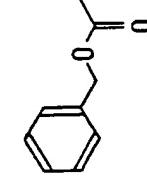
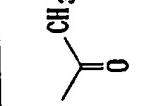
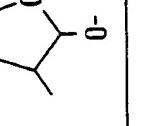
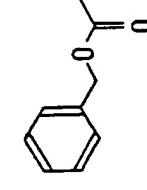
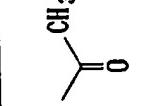
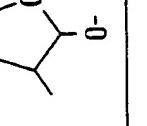
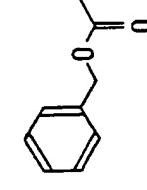
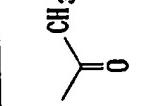
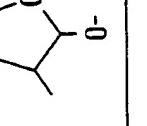
化合物 番号	R <sup>1</sup>	R <sup>4</sup>	R <sup>5</sup>	R <sup>6</sup>	R <sup>7</sup>	
553		-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-CH <sub>3</sub>		
554		-CH <sub>3</sub>	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-CH <sub>3</sub>		
555		-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H		
556		-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H		

表 - 2 (つづき)

化合物番号	R <sup>1</sup>	R <sup>4</sup>	R <sup>5</sup>	R <sup>6</sup>	R <sup>7</sup>	$\text{A}'\text{O}^-$
557		-H	$-\text{CH}_2\text{CH}(\text{CH}_3)_2$	-H	$\text{CH}_3$	
558		-H	$-\text{CH}_2\text{CH}(\text{CH}_3)_2$	-H	$\text{CH}_3$	
559		-H	$-\text{CH}_2\text{CH}(\text{CH}_3)_2$	-H	$\text{CH}_3$	
560		-H	$-\text{CH}_2\text{CH}(\text{CH}_3)_2$	-H	$\text{CH}_3$	

表 - 2 (つづき)

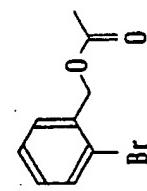
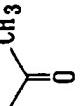
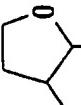
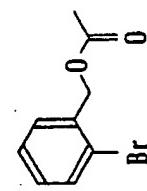
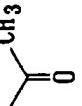
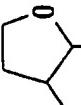
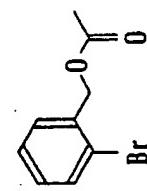
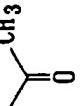
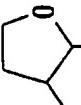
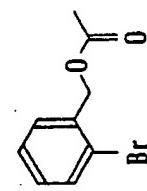
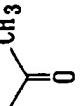
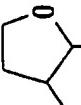
化合物番号	R <sup>1</sup>	R <sup>4</sup>	R <sup>5</sup>	R <sup>6</sup>	R <sup>7</sup>	A
561		-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H		
562		-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H		
563		-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H		
564		-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H		

表 - 2 (つづき)

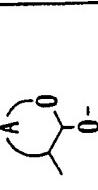
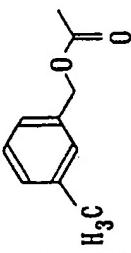
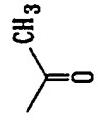
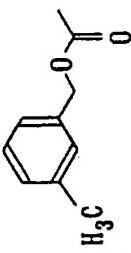
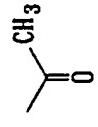
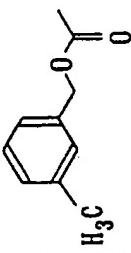
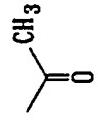
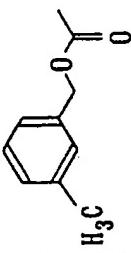
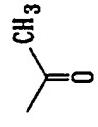
化合物 番号	R <sup>1</sup>	R <sup>4</sup>	R <sup>5</sup>	R <sup>6</sup>	R <sup>7</sup>	
565		-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H		
566		-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H		
567		-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H		
568		-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H		

表 - 2 (つづき)

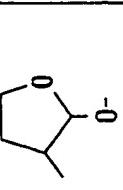
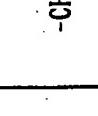
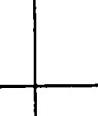
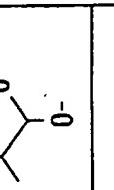
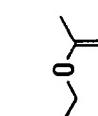
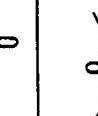
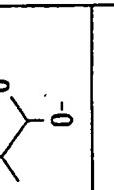
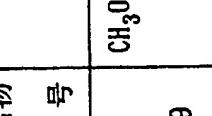
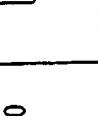
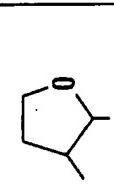
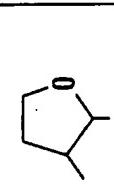
化合物 番号	R <sup>1</sup>	R <sup>4</sup>	R <sup>5</sup>	R <sup>6</sup>	R <sup>7</sup>	
569		-H		-H		
570		-H		-H		
571		-H		-H		
572		-H		-H		

表 - 2 (つづき)

化合物 番号	R <sup>1</sup>	R <sup>4</sup>	R <sup>5</sup>	R <sup>6</sup>	R <sup>7</sup>	A
573		-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H		
574		-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H		
575		-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H		
576		-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H		

表 - 2 (つづき)

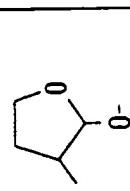
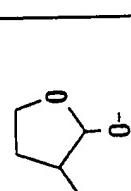
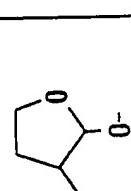
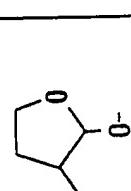
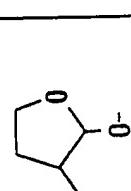
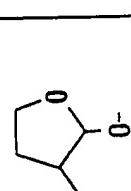
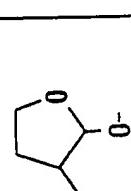
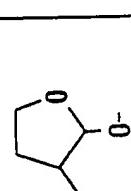
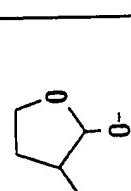
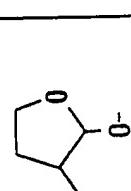
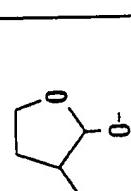
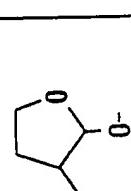
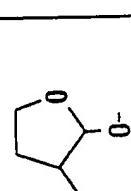
化合物 番号	R <sup>1</sup>	R <sup>4</sup>	R <sup>5</sup>	R <sup>6</sup>	R <sup>7</sup>	
577		-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H		
578		-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H		
579		-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H		
580		-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H		

表 - 2 (つづき)

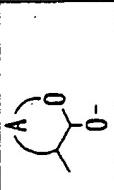
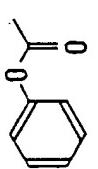
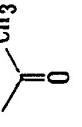
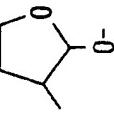
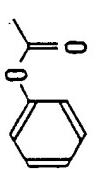
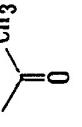
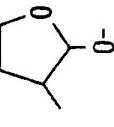
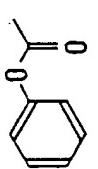
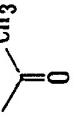
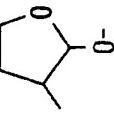
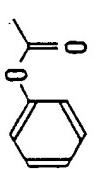
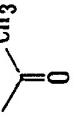
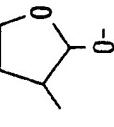
化合物 番号	R <sup>1</sup>	R <sup>4</sup>	R <sup>5</sup>	R <sup>6</sup>	R <sup>7</sup>	
581		-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H		
582		-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H		
583		-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H		
584		-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H		

表 - 2 (つづき)

化合物 番号	R <sup>1</sup>	R <sup>4</sup>	R <sup>5</sup>	R <sup>6</sup>	R <sup>7</sup>	
585		-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H		
586		-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H		
587		-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H		
588		-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H		

1 1 1

表 - 2 (つづき)

化合物 番号	R <sup>1</sup>	R <sup>4</sup>	R <sup>5</sup>	R <sup>6</sup>	R <sup>7</sup>	
589		-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H		
590		-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H		
591		-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H		
592		-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H		

表 - 2 (つづき)

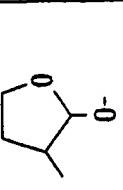
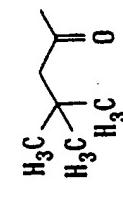
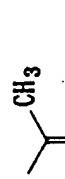
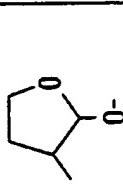
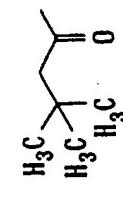
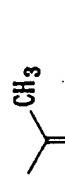
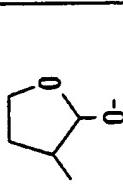
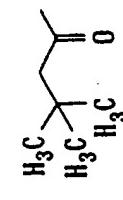
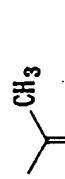
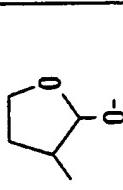
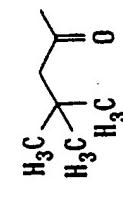
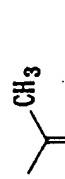
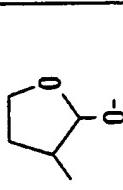
化合物番号	R <sup>1</sup>	R <sup>4</sup>	R <sup>5</sup>	R <sup>6</sup>	R <sup>7</sup>	
593		-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H		
594		-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H		
595		-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H		
596		-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H		

表 - 2 (つづき)

化合物番号	R <sup>1</sup>	R <sup>4</sup>	R <sup>5</sup>	R <sup>6</sup>	R <sup>7</sup>
597	CH <sub>3</sub> (CH <sub>2</sub> ) <sub>10</sub> C=O	-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H	CH <sub>3</sub> C(=O)O-
598	CH <sub>3</sub> (CH <sub>2</sub> ) <sub>12</sub> C=O	-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H	CH <sub>3</sub> C(=O)O-
599	CH <sub>3</sub> (CH <sub>2</sub> ) <sub>14</sub> C=O	-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H	CH <sub>3</sub> C(=O)O-
600	cyclohexylidene	-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H	CH <sub>3</sub> C(=O)O-

表 - 2 (つづき)

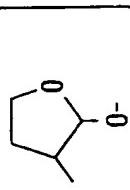
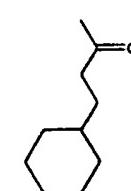
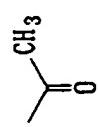
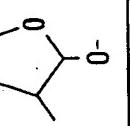
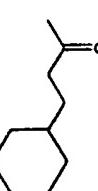
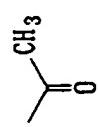
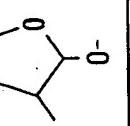
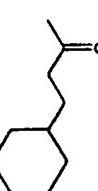
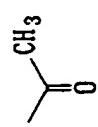
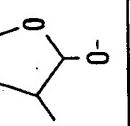
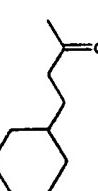
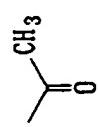
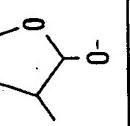
化合物 番号	R <sup>1</sup>	R <sup>4</sup>	R <sup>5</sup>	R <sup>6</sup>	R <sup>7</sup>	
601		-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H		
602		-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H		
603		-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H		
604				-H		

表 - 2 (つづき)

化合物番号	R <sup>1</sup>	R <sup>4</sup>	R <sup>5</sup>	R <sup>6</sup>	R <sup>7</sup>
605		-H		-H	
606		-H		-H	
607		-H		-H	
608		-H		-H	

表 - 2 (つづき)

化合物番号	R <sup>1</sup>	R <sup>4</sup>	R <sup>5</sup>	R <sup>6</sup>	R <sup>7</sup>	(つづき)
609		-H		-H		
610		-H		-H		
611		-H		-H		
612		-H		-H		

表 - 2 (つづき)

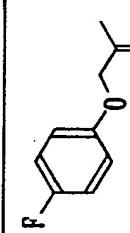
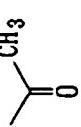
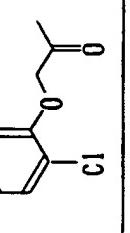
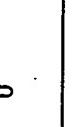
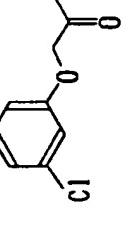
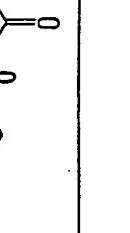
化合物番号	R <sup>1</sup>	R <sup>4</sup>	R <sup>5</sup>	R <sup>6</sup>	R <sup>7</sup>
613		-H	$-\text{CH}_2\text{CH}(\text{CH}_3)_2$	-H	
614		-H	$-\text{CH}_2\text{CH}(\text{CH}_3)_2$	-H	
615		-H	$-\text{CH}_2\text{CH}(\text{CH}_3)_2$	-H	
616		-H	$-\text{CH}_2\text{CH}(\text{CH}_3)_2$	-H	
					

表 - 2 (つづき)

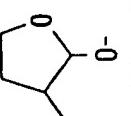
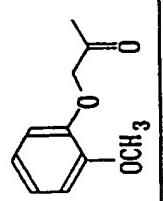
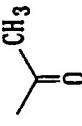
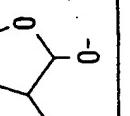
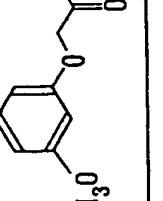
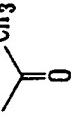
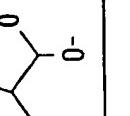
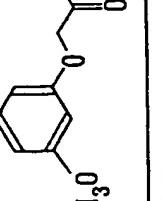
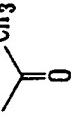
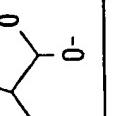
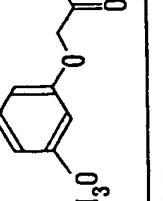
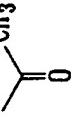
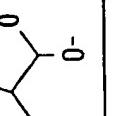
化合物 番号	R <sup>1</sup>	R <sup>4</sup>	R <sup>5</sup>	R <sup>6</sup>	R <sup>7</sup>	
617		-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H		
618		-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H		
619		-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H		
620		-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H		

表 - 2 (つづき)

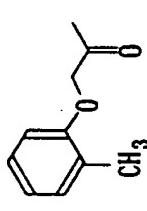
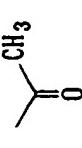
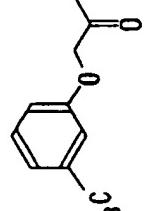
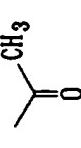
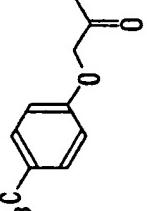
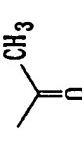
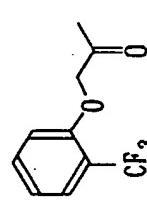
化合物 番号	R <sup>1</sup>	R <sup>4</sup>	R <sup>5</sup>	R <sup>6</sup>	R <sup>7</sup>	
621		-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H		
622		-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H		
623		-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H		
624		-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H		

表 - 2 (つづき)

化合物 番号	R <sup>1</sup>	R <sup>4</sup>	R <sup>5</sup>	R <sup>6</sup>	R <sup>7</sup>	(A) O -O-
625		-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H		
626		-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H		
627		-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H		
628		-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H		

表 - 2 (つづき)

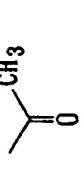
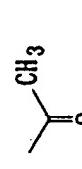
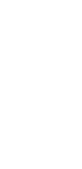
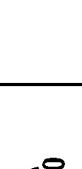
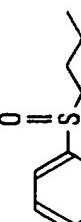
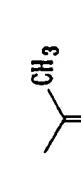
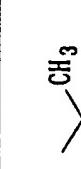
化合物番号	R <sup>1</sup>	R <sup>4</sup>	R <sup>5</sup>	R <sup>6</sup>	R <sup>7</sup>	
629		-H				
630		-H				
631		-H				
632		-H				

表 - 2 (つづき)

化合物 番号	R <sup>1</sup>	R <sup>4</sup>	R <sup>5</sup>	R <sup>6</sup>	R <sup>7</sup>
633		-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H	
634		-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H	
635		-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H	
636		-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H	

1 2 3

表 - 2 (つづき)

化合物 番 号	R <sup>1</sup>	R <sup>4</sup>	R <sup>5</sup>	R <sup>6</sup>	R <sup>7</sup>
637		-H		-H	
638		-H		-H	
639		-H		-H	
640		-H		-H	

1 2 4

表 - 2 (つづき)

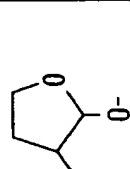
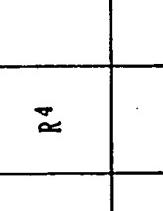
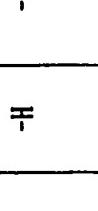
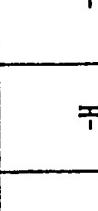
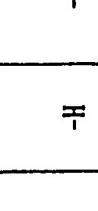
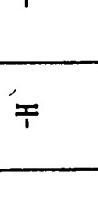
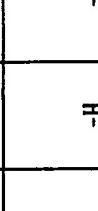
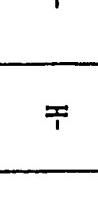
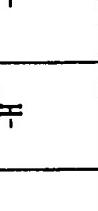
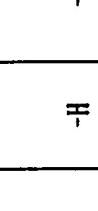
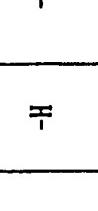
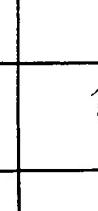
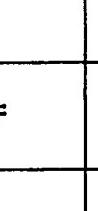
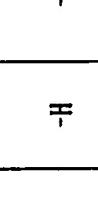
化合物 番号	R <sup>1</sup>	R <sup>4</sup>	R <sup>5</sup>	R <sup>6</sup>	R <sup>7</sup>	
641		-H		-H		
642		-H		-H		
643		-H		-H		
644		-H		-H		

表 - 2 (つづき)

化合物 番 号	R <sup>1</sup>	R <sup>4</sup>	R <sup>5</sup>	R <sup>6</sup>	R <sup>7</sup>	
645		-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H		
646		-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H		
647		-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H		
648		-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H		

表 - 2 (つづき)

化合物番号	R <sup>1</sup>	R <sup>4</sup>	R <sup>5</sup>	R <sup>6</sup>	R <sup>7</sup>
649		-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H	
650		-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H	
651		-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H	
652		-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H	

表 - 2 (つづき)

化合物 番号	R <sup>1</sup>	R <sup>4</sup>	R <sup>5</sup>	R <sup>6</sup>	R <sup>7</sup>
653		-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H	
654		-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H	
655		-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H	
656		-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H	

表 - 2 (つづき)

化合物 番号	R <sup>1</sup>	R <sup>4</sup>	R <sup>5</sup>	R <sup>6</sup>	R <sup>7</sup>	(A) O -O-
657	<chem>F3C-C(=O)c1ccc(cc1)C</chem>	-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H	<chem>CC(=O)C</chem>	<chem>CC1(C)OC1</chem> -O-
658	<chem>COC(=O)c1ccccc1</chem>	-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H	<chem>CC(=O)C</chem>	<chem>CC1(C)OC1</chem> -O-
659	<chem>COC(=O)c1ccccc1</chem>	-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H	<chem>CC(=O)C</chem>	<chem>CC1(C)OC1</chem> -O-
660	<chem>COC(=O)c1ccccc1</chem>	-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H	<chem>CC(=O)C</chem>	<chem>CC1(C)OC1</chem> -O-

表 - 2 (つづき)

化合物番号	R <sup>1</sup>	R <sup>4</sup>	R <sup>5</sup>	R <sup>6</sup>	R <sup>7</sup>
661		-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H	
662		-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H	
663		-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H	
664		-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H	

表 - 2 (つづき)

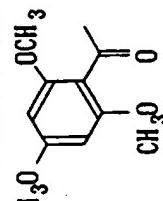
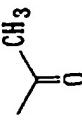
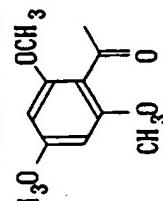
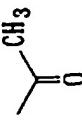
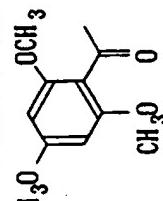
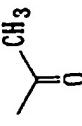
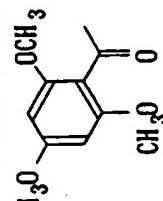
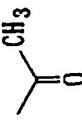
化合物 番 号	R <sup>1</sup>	R <sup>4</sup>	R <sup>5</sup>	R <sup>6</sup>	R <sup>7</sup>	
665		-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H		
666		-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H		
667		-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H		
668		-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H		

表 - 2 (つづき)

化合物 番 号	R <sup>1</sup>	R <sup>4</sup>	R <sup>5</sup>	R <sup>6</sup>	R <sup>7</sup>
669		-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H	
670		-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H	
671		-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H	
672		-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H	

表 - 2 (つづき)

化合物 番号	R <sup>1</sup>	R <sup>4</sup>	R <sup>5</sup>	R <sup>6</sup>	R <sup>7</sup>	A
673		-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H	CH <sub>3</sub> C=O	
674		-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H	CH <sub>3</sub> C=O	
675		-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H	CH <sub>3</sub> C=O	
676		-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H	CH <sub>3</sub> C=O	

表 - 2 (つづき)

化合物 番号	R <sup>1</sup>	R <sup>4</sup>	R <sup>5</sup>	R <sup>6</sup>	R <sup>7</sup>
677		-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H	
678		-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H	
679		-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H	
680		-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H	

表 - 2 (つづき)

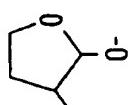
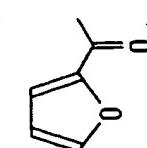
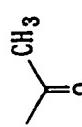
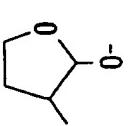
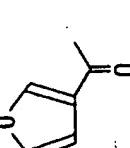
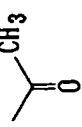
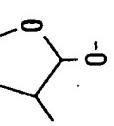
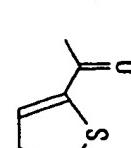
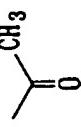
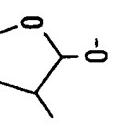
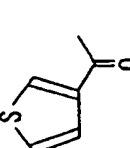
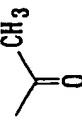
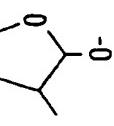
化合物番号	R <sup>1</sup>	R <sup>4</sup>	R <sup>5</sup>	R <sup>6</sup>	R <sup>7</sup>	
681		-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H		
682		-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H		
683		-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H		
684		-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H		

表 - 2 (つづき)

化合物番号	R <sup>1</sup>	R <sup>4</sup>	R <sup>5</sup>	R <sup>6</sup>	R <sup>7</sup>	
685		-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H		
686		-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H		
687		-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H		
688		CH <sub>3</sub>	-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H	

表 - 2 (つづき)

化合物 番号	R <sup>1</sup>	R <sup>4</sup>	R <sup>5</sup>	R <sup>6</sup>	R <sup>7</sup>	(A) O -O-
689		-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H		
690		-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H		
691		-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H		
692		-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H		

表 - 2 (つづき)

化合物番号	R <sup>1</sup>	R <sup>4</sup>	R <sup>5</sup>	R <sup>6</sup>	R <sup>7</sup>	(A) O -O-
693		-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H		
694		-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H		
695		-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H		
696		-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H		

表 - 2 (つづき)

化合物 番号	R <sup>1</sup>	R <sup>4</sup>	R <sup>5</sup>	R <sup>6</sup>	R <sup>7</sup>	(A)
697		-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H		
698		-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H		
699		-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H		
700		-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H		

表 - 2 (つづき)

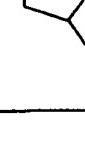
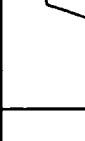
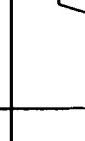
化合物 番 号	R <sup>1</sup>	R <sup>4</sup>	R <sup>5</sup>	R <sup>6</sup>	R <sup>7</sup>	
701	$\text{H}_3\text{C}-\text{CH=CH}_2$	-H	$-\text{CH}_2\text{CH}(\text{CH}_3)_2$	-H	$\text{CH}_3-\text{C}(=\text{O})-$	
702				-H	$\text{CH}_3-\text{C}(=\text{O})-$	
703				-H	$\text{CH}_3-\text{C}(=\text{O})-$	
704				-H	$\text{CH}_3-\text{C}(=\text{O})-$	

表 - 2 (つづき)

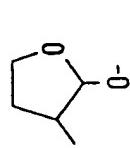
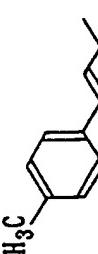
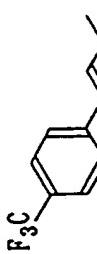
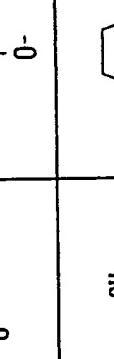
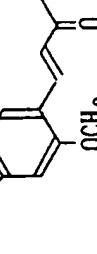
化合物 番号	R <sup>1</sup>	R <sup>4</sup>	R <sup>5</sup>	R <sup>6</sup>	R <sup>7</sup>	
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706		-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H		
707		-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H		
708		-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H		

表 - 2 (つづき)

化合物 番号	R <sup>1</sup>	R <sup>4</sup>	R <sup>5</sup>	R <sup>6</sup>	R <sup>7</sup>
709		-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H	
710		-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H	
711		-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H	
712		-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H	

表 - 2 (つづき)

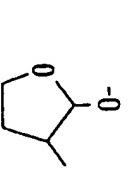
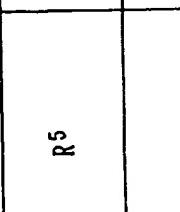
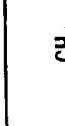
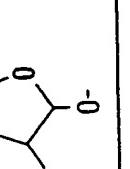
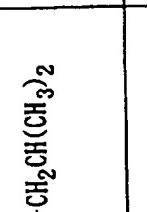
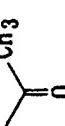
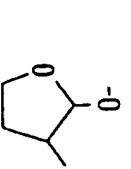
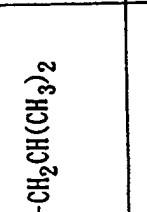
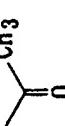
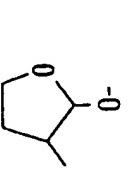
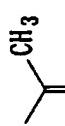
化合物 番号	R <sup>1</sup>	R <sup>4</sup>	R <sup>5</sup>	R <sup>6</sup>	R <sup>7</sup>	
713		-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H		
714		-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H		
715		-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H		
716		-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H		

表 - 2 (つづき)

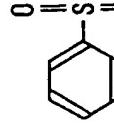
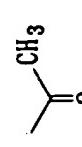
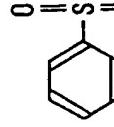
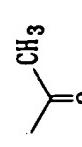
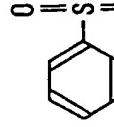
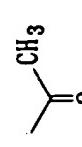
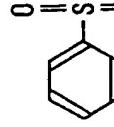
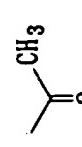
化合物 番号	R <sup>1</sup>	R <sup>4</sup>	R <sup>5</sup>	R <sup>6</sup>	R <sup>7</sup>	(A) O -O-
717		-CH <sub>3</sub>	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H		
718		-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-CH <sub>3</sub>		
719		-CH <sub>3</sub>	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-CH <sub>3</sub>		
720		-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H		

表 - 2 (つづき)

化合物 番号	R <sup>1</sup>	R <sup>4</sup>	R <sup>5</sup>	R <sup>6</sup>	R <sup>7</sup>	(A) O- 0-
721		-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H		
722		-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H		
723		-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H		
724		-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H		

表 - 2 (つづき)

化合物番号	R <sup>1</sup>	R <sup>4</sup>	R <sup>5</sup>	R <sup>6</sup>	R <sup>7</sup>
725		-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H	
726		-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H	
727		-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H	
728		-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H	

表 - 2 (つづき)

化合物番号	R <sup>1</sup>	R <sup>4</sup>	R <sup>5</sup>	R <sup>6</sup>	R <sup>7</sup>
729		-H		-H	
730		-H		-H	
731		-H		-H	
732		-H		-H	

表 - 2 (つづき)

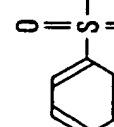
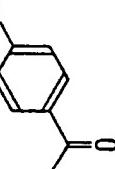
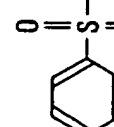
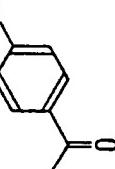
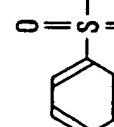
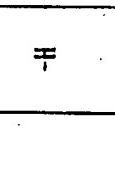
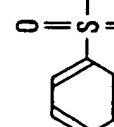
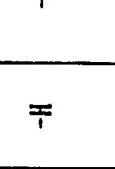
化合物番号	R <sup>1</sup>	R <sup>4</sup>	R <sup>5</sup>	R <sup>6</sup>	R <sup>7</sup>
733		-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H	
734		-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H	
735		-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H	
736		-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H	

表 - 2 (つづき)

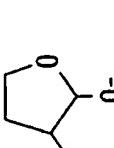
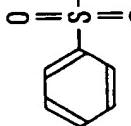
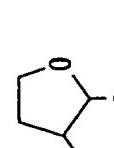
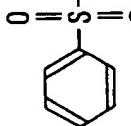
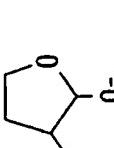
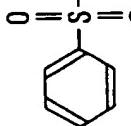
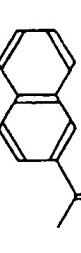
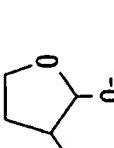
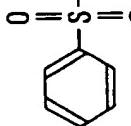
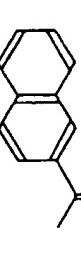
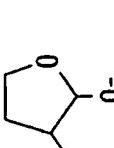
化合物番号	R <sup>1</sup>	R <sup>4</sup>	R <sup>5</sup>	R <sup>6</sup>	R <sup>7</sup>	
737		-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>			
738		-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H		
739		-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H		
740		-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H		

表 - 2 (つづき)

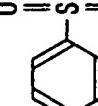
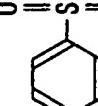
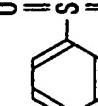
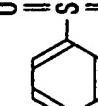
化合物 番号	R <sup>1</sup>	R <sup>4</sup>	R <sup>5</sup>	R <sup>6</sup>	R <sup>7</sup>
741		-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H	-CH <sub>3</sub>
742		-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H	-CH <sub>2</sub> CH <sub>3</sub>
743		-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H	-CH <sub>2</sub> CH <sub>2</sub> CH <sub>3</sub>
744		-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H	-CH(CH <sub>3</sub> ) <sub>2</sub>

表 - 2 (つづき)

化合物 番号	R <sup>1</sup>	R <sup>4</sup>	R <sup>5</sup>	R <sup>6</sup>	R <sup>7</sup>
745		-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H	-CH <sub>2</sub> CH <sub>2</sub> CH <sub>2</sub> CH <sub>3</sub>
746		-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>
747		-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H	-C(CH <sub>3</sub> ) <sub>3</sub>
748		-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H	-CH <sub>2</sub> CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>

表 - 2 (つづき)

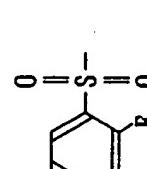
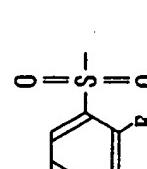
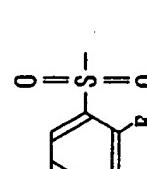
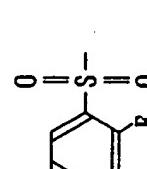
化合物 番号	R <sup>1</sup>	R <sup>4</sup>	R <sup>5</sup>	R <sup>6</sup>	R <sup>7</sup>
749		-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H	
750		-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H	
751		-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H	
752		-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H	

表 - 2 (つづき)

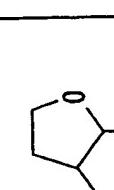
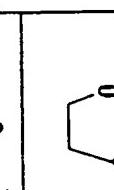
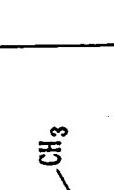
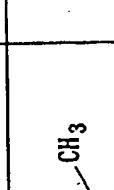
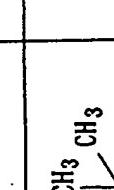
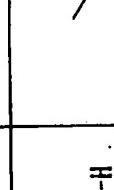
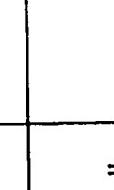
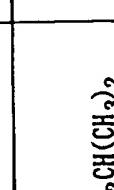
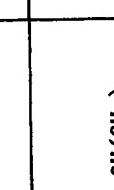
化合物番号	R <sup>1</sup>	R <sup>4</sup>	R <sup>5</sup>	R <sup>6</sup>	R <sup>7</sup>	
753		-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H		
754		-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H		
755		-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H		
756		-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H		

表 - 2 (つづき)

化合物番号	R <sup>1</sup>	R <sup>4</sup>	R <sup>5</sup>	R <sup>6</sup>	R <sup>7</sup>
757		-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H	
758		-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H	
759		-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H	
760		-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H	

表 - 2 (つづき)

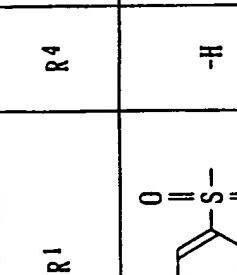
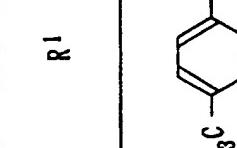
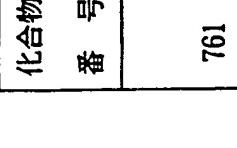
化合物 番号	R <sup>1</sup>	R <sup>4</sup>	R <sup>5</sup>	R <sup>6</sup>	R <sup>7</sup>
761		-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H	
762		-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H	
763		-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H	
764		-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H	

表 - 2 (つづき)

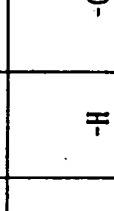
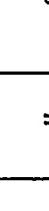
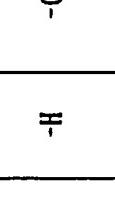
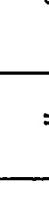
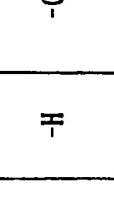
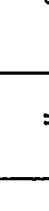
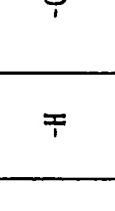
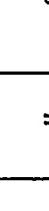
化合物 番号	R <sup>1</sup>	R <sup>4</sup>	R <sup>5</sup>	R <sup>6</sup>	R <sup>7</sup>
765		-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H	
766		-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H	
767		-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H	
768		-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H	

表 - 2 (つづき)

化合物 番号	R <sup>1</sup>	R <sup>4</sup>	R <sup>5</sup>	R <sup>6</sup>	R <sup>7</sup>
769		-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H	 CH <sub>3</sub> C(=O) O-
770		-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H	 CH <sub>3</sub> C(=O) O-
771		-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H	 CH <sub>3</sub> C(=O) O-
772		-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H	 CH <sub>3</sub> C(=O) O-

表 - 2 (つづき)

化合物番号	R <sup>1</sup>	R <sup>4</sup>	R <sup>5</sup>	R <sup>6</sup>	R <sup>7</sup>
773		-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H	
774		-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H	
775		-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H	
776		-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H	

表 - 2 (つづき)

化合物 番号	R <sup>1</sup>	R <sup>4</sup>	R <sup>5</sup>	R <sup>6</sup>	R <sup>7</sup>
777		-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H	
778		-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H	
779		-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H	
780		-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H	

表 - 2 (つづき)

化合物番号	R <sup>1</sup>	R <sup>4</sup>	R <sup>5</sup>	R <sup>6</sup>	R <sup>7</sup>
781		-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H	
782		-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H	
783		-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H	
784		-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H	

表 - 2 (つづき)

化合物番号	R <sup>1</sup>	R <sup>4</sup>	R <sup>5</sup>	R <sup>6</sup>	R <sup>7</sup>
785		-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H	
786		-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H	
787		-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H	
788		-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H	

表 - 2 (つづき)

化合物 番号	R <sup>1</sup>	R <sup>4</sup>	R <sup>5</sup>	R <sup>6</sup>	R <sup>7</sup>
789		-H		-H	
790		-H		-H	
791	H-	-H		-H	
792			-H		-H

表 - 2 (つづき)

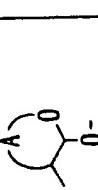
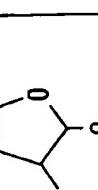
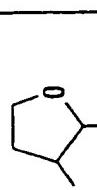
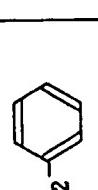
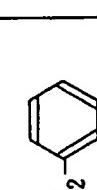
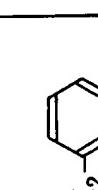
化合物 番号	R <sup>1</sup>	R <sup>4</sup>	R <sup>5</sup>	R <sup>6</sup>	R <sup>7</sup>	
793		-H		-H		
794		-H		-H		
795		-H		-H		
796		-H		-H		

表 - 2 (つづき)

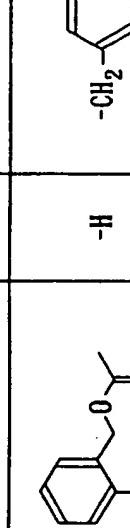
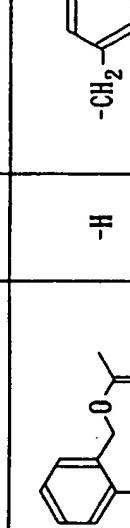
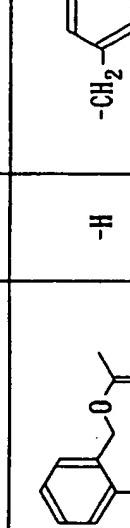
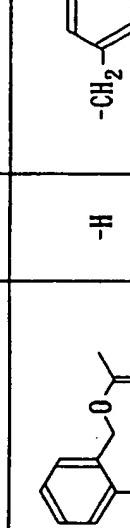
化合物 番号	R <sup>1</sup>	R <sup>4</sup>	R <sup>5</sup>	R <sup>6</sup>	R <sup>7</sup>
797		-H		-H	
798		-H		-H	
799		-H		-H	
800		-H		-H	

表 - 2 (つづき)

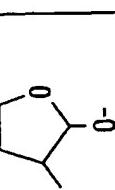
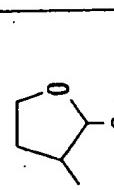
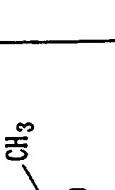
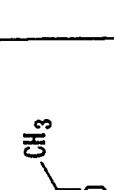
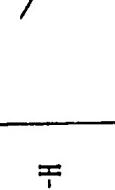
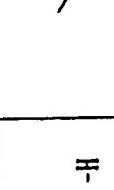
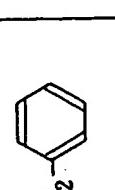
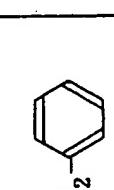
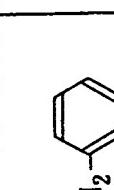
化合物 番 号	R <sup>1</sup>	R <sup>4</sup>	R <sup>5</sup>	R <sup>6</sup>	R <sup>7</sup>
801		-H		-H	
802		-H		-H	
803		-H		-H	
804		-H		-H	

表 - 2 (つづき)

化合物番号	R <sup>1</sup>	R <sup>4</sup>	R <sup>5</sup>	R <sup>6</sup>	R <sup>7</sup>
805		-H		-H	
806		-H		-H	
807		-H		-H	
808		-H		-H	

表 - 2 (つづき)

化合物番号	R <sup>1</sup>	R <sup>4</sup>	R <sup>5</sup>	R <sup>6</sup>	R <sup>7</sup>	
809		-H		-H		
810		-H		-H		
811		-H		-H		
812		-H		-H		

表 - 2 (つづき)

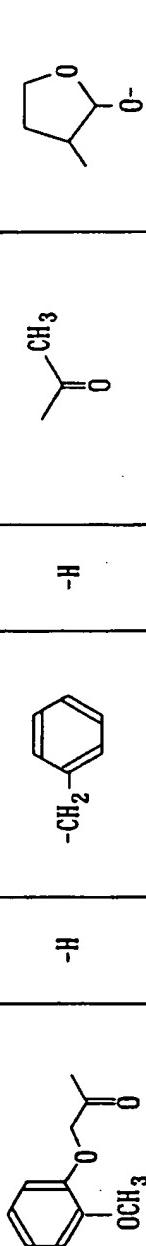
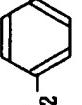
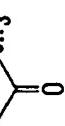
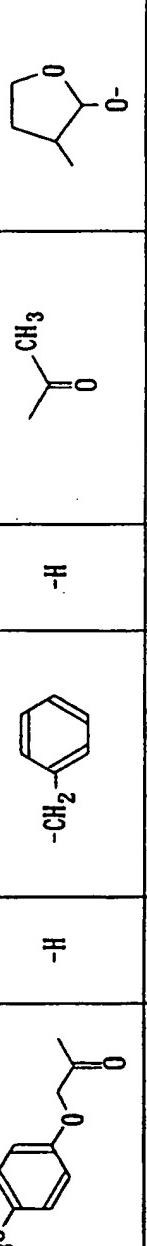
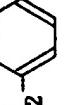
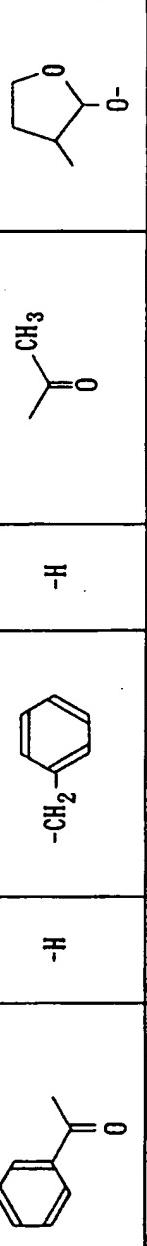
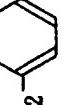
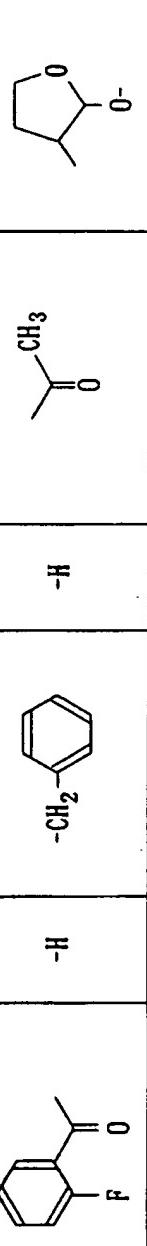
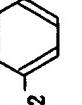
化合物 番号	R <sup>1</sup>	R <sup>4</sup>	R <sup>5</sup>	R <sup>6</sup>	R <sup>7</sup>
813		-H	-CH <sub>2</sub> 	-H	CH <sub>3</sub> 
814		-H	-CH <sub>2</sub> 	-H	CH <sub>3</sub> 
815		-H	-CH <sub>2</sub> 	-H	CH <sub>3</sub> 
816		-H	-CH <sub>2</sub> 	-H	CH <sub>3</sub> 

表 - 2 (つづき)

化合物番号	R <sup>1</sup>	R <sup>4</sup>	R <sup>5</sup>	R <sup>6</sup>	R <sup>7</sup>	(A)
817		-H		-H		
818		-H		-H		
819		-H		-H		
820		-H		-H		

表 - 2 (つづき)

化合物 番号	R <sup>1</sup>	R <sup>4</sup>	R <sup>5</sup>	R <sup>6</sup>	R <sup>7</sup>
821		-H		-H	
822		-H		-H	
823		-H		-H	
824		-H		-H	

表 - 2 (つづき)

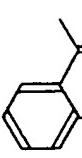
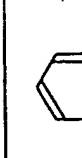
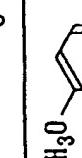
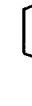
化合物 番 号	R <sup>1</sup>	R <sup>4</sup>	R <sup>5</sup>	R <sup>6</sup>	R <sup>7</sup>
825		-H		-H	
826		-H		-H	
827		-H		-H	
828		-H		-H	
					

表 - 2 (つづき)

化合物番号	R <sup>1</sup>	R <sup>4</sup>	R <sup>5</sup>	R <sup>6</sup>	R <sup>7</sup>
829		-H		-H	
830		-H		-H	
831		-H		-H	
832				-H	

表 - 2 (つづき)

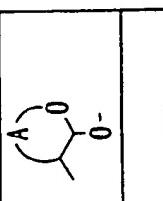
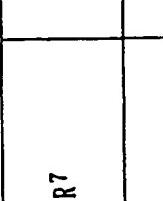
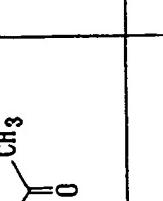
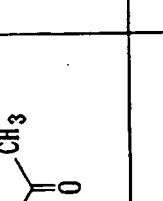
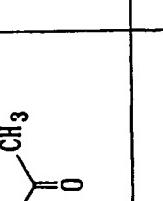
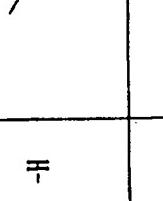
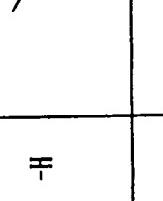
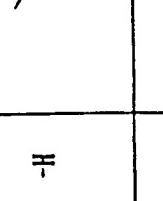
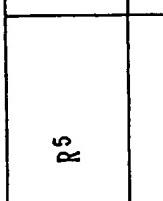
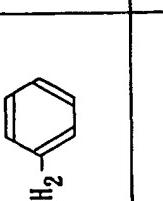
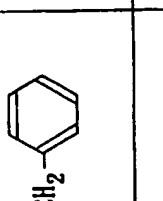
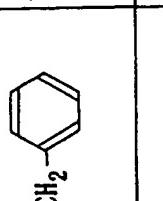
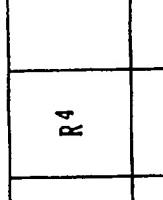
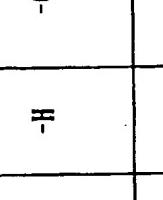
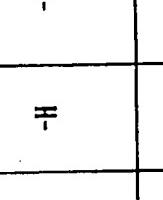
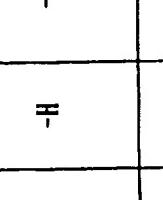
化合物番号	R <sup>1</sup>	R <sup>4</sup>	R <sup>5</sup>	R <sup>6</sup>	R <sup>7</sup>	
833		-H				
834				-H		
835				-H		
836		Cl		-H		

表 - 2 (つづき)

化合物 番号	R <sup>1</sup>	R <sup>4</sup>	R <sup>5</sup>	R <sup>6</sup>	R <sup>7</sup>
837		-H		-H	
838			-H		
839			-H		
840			-H		

表 - 2 (つづき)

化合物 番号	R <sup>1</sup>	R <sup>4</sup>	R <sup>5</sup>	R <sup>6</sup>	R <sup>7</sup>
841		-H		-H	
842		-H		-H	
843		-H		-H	
844		-H		-H	

表 - 2 (つづき)

化合物 番号	R <sup>1</sup>	R <sup>4</sup>	R <sup>5</sup>	R <sup>6</sup>	R <sup>7</sup>
845		-H	-CH <sub>2</sub> CH <sub>2</sub> SCH <sub>3</sub>	-H	
846		-H	-CH <sub>2</sub> CH <sub>2</sub> SCH <sub>3</sub>	-H	
847		-H	-CH <sub>2</sub> OC(CH <sub>3</sub> ) <sub>3</sub>	-H	
848		-H	-CH <sub>2</sub> OC(CH <sub>3</sub> ) <sub>3</sub>	-H	

表 - 2 (つづき)

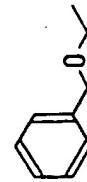
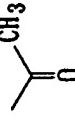
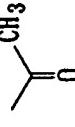
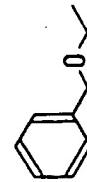
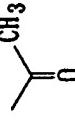
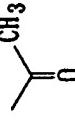
化合物番号	R <sup>1</sup>	R <sup>4</sup>	R <sup>5</sup>	R <sup>6</sup>	R <sup>7</sup>	(A)
849		-H				
850		-H		-H		
851				-H		
852				-H		

表 - 2 (つづき)

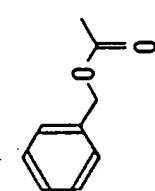
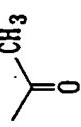
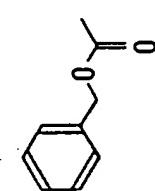
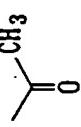
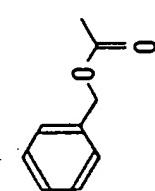
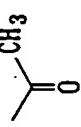
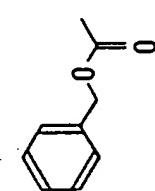
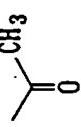
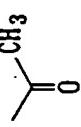
化合物 番号	R <sup>1</sup>	R <sup>4</sup>	R <sup>5</sup>	R <sup>6</sup>	R <sup>7</sup>
853		-H		-H	
854		-H		-H	
855		-H		-CH <sub>3</sub>	
856		-H		-CH <sub>3</sub>	
					

表 - 2 (つづき)

化合物番号	R <sup>1</sup>	R <sup>4</sup>	R <sup>5</sup>	R <sup>6</sup>	R <sup>7</sup>
857		-H	-CH <sub>2</sub> CH <sub>2</sub> CH <sub>3</sub>	-H	
858		-H	-H	-CH <sub>2</sub> CH <sub>2</sub> CH <sub>3</sub>	-H
859		-H	-CH(CH <sub>3</sub> ) <sub>2</sub>	-H	
860		-H	-H	-CH(CH <sub>3</sub> ) <sub>2</sub>	-H

表 - 2 (つづき)

化合物 番号	R <sup>1</sup>	R <sup>4</sup>	R <sup>5</sup>	R <sup>6</sup>	R <sup>7</sup>	
861		-H		-H		
862		-H		-H		
863	H-	-H		-H		
864		-H		-H		

表 - 2 (つづき)

化合物 番号	R <sup>1</sup>	R <sup>4</sup>	R <sup>5</sup>	R <sup>6</sup>	R <sup>7</sup>
865		-H	$-\text{CH}_2\text{CH}(\text{CH}_3)_2$	-H	
866		-H	$-\text{CH}_2\text{CH}(\text{CH}_3)_2$	-H	
867		-H	$-\text{CH}_2\text{CH}(\text{CH}_3)_2$	-H	
868		-H	$-\text{CH}_2\text{CH}(\text{CH}_3)_2$	-H	

表 - 2 (つづき)

化合物 番 号	R <sup>1</sup>	R <sup>4</sup>	R <sup>5</sup>	R <sup>6</sup>	R <sup>7</sup>
869		-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H	
870		-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H	
871		-H		-H	
872		-H		-H	

表 - 2 (つづき)

化合物 番号	R <sup>1</sup>	R <sup>4</sup>	R <sup>5</sup>	R <sup>6</sup>	R <sup>7</sup>
873		-H	-CH <sub>2</sub> CH <sub>2</sub> SCH <sub>3</sub>	-H	
874		-H	-H	-CH <sub>2</sub> CH <sub>2</sub> SCH <sub>3</sub>	
875		-H	-H	-CH <sub>2</sub> OC(CH <sub>3</sub> ) <sub>3</sub>	
876		-H	-H	-CH <sub>2</sub> OC(CH <sub>3</sub> ) <sub>3</sub>	

表 - 2 (つづき)

化合物 番号	R <sup>1</sup>	R <sup>4</sup>	R <sup>5</sup>	R <sup>6</sup>	R <sup>7</sup>
877		-H	-CH <sub>2</sub> OH	-H	
878		-H	-CH <sub>2</sub> OH	-H	
879		-H	-H		
880		-H	-H		

表 - 2 (つづき)

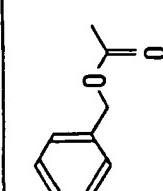
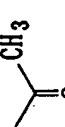
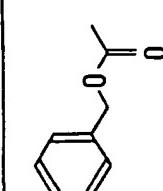
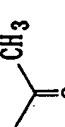
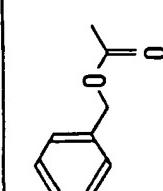
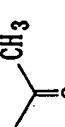
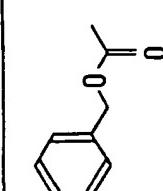
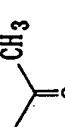
化合物番号	R <sup>1</sup>	R <sup>4</sup>	R <sup>5</sup>	R <sup>6</sup>	R <sup>7</sup>	
881		-H	-H	-H		
882		-H	-H	-H		
883		-H	-CH <sub>3</sub>	-H		
884		-H	-CH <sub>3</sub>	-H		

表 - 2 (つづき)

化合物番号	R <sup>1</sup>	R <sup>4</sup>	R <sup>5</sup>	R <sup>6</sup>	R <sup>7</sup>
885		-H	-CH <sub>2</sub> CH <sub>2</sub> CH <sub>3</sub>	-H	
886		-H	-CH <sub>2</sub> CH <sub>2</sub> CH <sub>3</sub>	-H	
887		-H	-CH(CH <sub>3</sub> ) <sub>2</sub>	-H	
888		-H	-CH(CH <sub>3</sub> ) <sub>2</sub>	-H	

表 - 2 (つづき)

化合物番号	R <sup>1</sup>	R <sup>4</sup>	R <sup>5</sup>	R <sup>6</sup>	R <sup>7</sup>
889		-H	-CH <sub>2</sub> CH <sub>2</sub> CH <sub>2</sub> CH <sub>3</sub>	-H	
890		-H	-CH <sub>2</sub> CH <sub>2</sub> CH <sub>2</sub> CH <sub>3</sub>	-H	
891	H-	-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H	
892		-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H	

表 - 2 (つづき)

化合物番号	R <sup>1</sup>	R <sup>4</sup>	R <sup>5</sup>	R <sup>6</sup>	R <sup>7</sup>
893		-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H	
894		-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H	
895		-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H	
896		-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H	

表 - 2 (つづき)

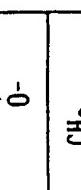
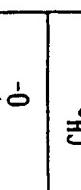
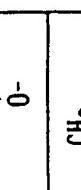
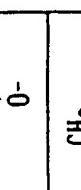
化合物 番 号	R <sup>1</sup>	R <sup>4</sup>	R <sup>5</sup>	R <sup>6</sup>	R <sup>7</sup>		
897		-H		-H			
898		-H		-H			
899		-H		-H			
900			-H		-H		

表 - 2 (つづき)

化合物番号	R <sup>1</sup>	R <sup>4</sup>	R <sup>5</sup>	R <sup>6</sup>	R <sup>7</sup>	
901		-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H		
902		-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H		
903		-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H		
904		-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H		

表 - 2 (つづき)

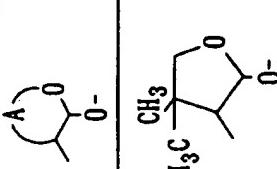
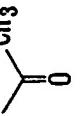
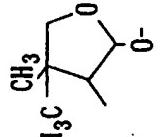
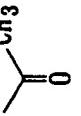
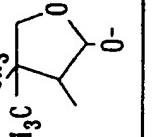
化合物 番号	R <sup>1</sup>	R <sup>4</sup>	R <sup>5</sup>	R <sup>6</sup>	R <sup>7</sup>	
905	Cl — C6H4 —O— C(=O)CH <sub>3</sub>	-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H		
906	H <sub>3</sub> C — C6H4 —O— C(=O)CH <sub>3</sub>	-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H		
907	CH <sub>3</sub> O — C6H4 —O— C(=O)CH <sub>3</sub>	-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H		
908	CH <sub>3</sub> O — C6H4 —O— C(=O)CH <sub>3</sub>	-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H		

表 - 2 (つづき)

化合物番号	R <sup>1</sup>	R <sup>4</sup>	R <sup>5</sup>	R <sup>6</sup>	R <sup>7</sup>	A
909		-H	$-\text{CH}_2\text{CH}(\text{CH}_3)_2$	-H	$\text{CH}_3$ C=O	
910		-H	$-\text{CH}_2\text{CH}(\text{CH}_3)_2$	-H	$\text{CH}_3$ C=O	
911		-H	$-\text{CH}_2\text{CH}(\text{CH}_3)_2$	-H	$\text{CH}_3$ C=O	
912		-H	$-\text{CH}_2\text{CH}(\text{CH}_3)_2$	-H	$\text{CH}_3$ C=O	

表 - 2 (つづき)

化合物番号	R <sup>1</sup>	R <sup>4</sup>	R <sup>5</sup>	R <sup>6</sup>	R <sup>7</sup>	
913		-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H		
914		-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H		
915		-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H		
916		-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H		

表 - 2 (つづき)

化合物番号	R <sup>1</sup>	R <sup>4</sup>	R <sup>5</sup>	R <sup>6</sup>	R <sup>7</sup>
917		-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H	
918		-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H	
919		-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H	
920		-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H	

表 - 2 (つづき)

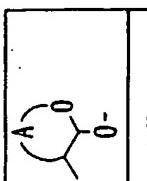
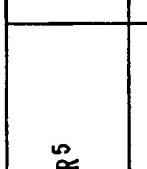
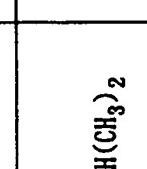
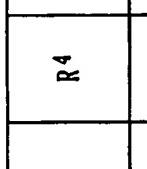
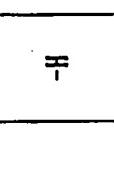
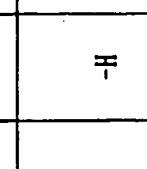
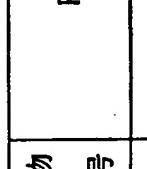
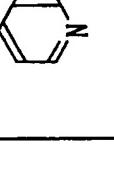
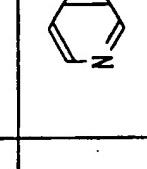
化合物 番号	R <sup>1</sup>	R <sup>4</sup>	R <sup>5</sup>	R <sup>6</sup>	R <sup>7</sup>	
921		-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H		
922		-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H		
923		-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H		
924		-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H		

表 - 2 (つづき)

化合物番号	R <sup>1</sup>	R <sup>4</sup>	R <sup>5</sup>	R <sup>6</sup>	R <sup>7</sup>	(A)
925		-H	$-\text{CH}_2\text{CH}(\text{CH}_3)_2$	-H	$\text{CH}_3$ C=O	
926	$\begin{matrix} \text{O} \\ \parallel \\ \text{H}_3\text{C}-\text{S}- \\ \parallel \\ \text{O} \end{matrix}$	-H	$-\text{CH}_2\text{CH}(\text{CH}_3)_2$	-H	$\text{CH}_3$ C=O	
927	$\begin{matrix} \text{H}_3\text{C} \\   \\ \text{O} \\ \parallel \\ \text{H}_3\text{C} \\   \\ \text{O} \end{matrix}$	-H	$-\text{CH}_2\text{CH}(\text{CH}_3)_2$	-H	$\text{CH}_3$ C=O	
928		-H	$-\text{CH}_2\text{CH}(\text{CH}_3)_2$	-H	$\text{CH}_3$ C=O	

表 - 2 (つづき)

化合物 番号	R <sup>1</sup>	R <sup>4</sup>	R <sup>5</sup>	R <sup>6</sup>	R <sup>7</sup>	A
929		-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H		
930		-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H		
931		-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H		
932		-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H		

表 - 2 (つづき)

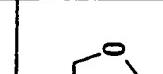
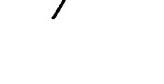
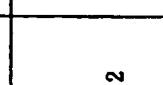
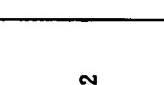
化合物 番号	R <sup>1</sup>	R <sup>4</sup>	R <sup>5</sup>	R <sup>6</sup>	R <sup>7</sup>	
933		-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H		
934		-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H		
935		-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H		
936		-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H		

表 - 2 (つづき)

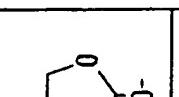
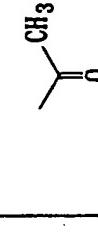
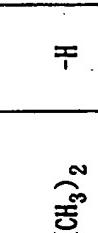
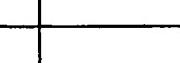
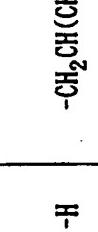
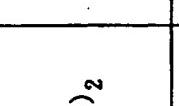
化合物 番号	R <sup>1</sup>	R <sup>4</sup>	R <sup>5</sup>	R <sup>6</sup>	R <sup>7</sup>	
937		-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H		
938		-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H		
939		-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H		
940		-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H		

表 - 2 (つづき)

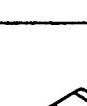
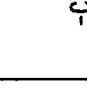
化合物番号	R <sup>1</sup>	R <sup>4</sup>	R <sup>5</sup>	R <sup>6</sup>	R <sup>7</sup>	
941	H-	-H	-CH <sub>2</sub> -C <sub>6</sub> H <sub>5</sub>	-H		
942		-H	-CH <sub>2</sub> -C <sub>6</sub> H <sub>5</sub>	-H		
943				-H		
944				-H		

表 - 2 (つづき)

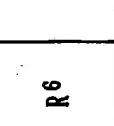
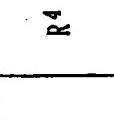
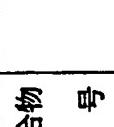
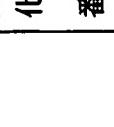
化合物 番号	R <sup>1</sup>	R <sup>4</sup>	R <sup>5</sup>	R <sup>6</sup>	R <sup>7</sup>	
945		-H		-H		
946		-H		-H		
947		-H		-H		
948						

表 - 2 (つづき)

化合物番号	R <sup>1</sup>	R <sup>4</sup>	R <sup>5</sup>	R <sup>6</sup>	R <sup>7</sup>	(A)O <sup>-</sup>	
949		-H		-H			
950		-H		-H			
951		-H		-H			
952						-H	

表 - 2 (つづき)

化合物 番号	R <sup>1</sup>	R <sup>4</sup>	R <sup>5</sup>	R <sup>6</sup>	R <sup>7</sup>	
953		-H		-H		
954		-H		-H		
955		-H		-H		
956				-H		

表 - 2 (つづき)

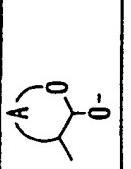
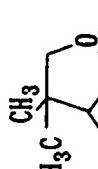
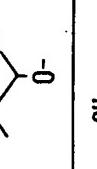
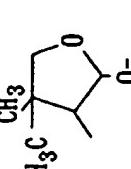
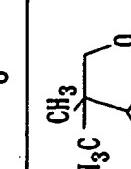
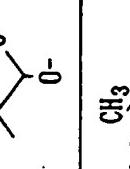
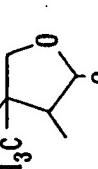
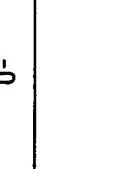
化合物番号	R <sup>1</sup>	R <sup>4</sup>	R <sup>5</sup>	R <sup>6</sup>	R <sup>7</sup>	
957		-H		-H		
958		-H		-H		
959		-H		-H		
960		-H		-H		

表 - 2 (つづき)

化合物番号	R <sup>1</sup>	R <sup>4</sup>	R <sup>5</sup>	R <sup>6</sup>	R <sup>7</sup>	(A)
961		-H		-H		
962		-H		-H		
963		-H		-H		
964		-H		-H		

表 - 2 (つづき)

化合物番号	R <sup>1</sup>	R <sup>4</sup>	R <sup>5</sup>	R <sup>6</sup>	R <sup>7</sup>
965		-H	$-\text{CH}_2\text{OC}(\text{CH}_3)_3$	-H	
966		-H	$-\text{CH}_2\text{OC}(\text{CH}_3)_3$	-H	
967		-H	$-\text{CH}_2\text{OH}$	-H	
968		-H	$-\text{CH}_2\text{OH}$	-H	

表 - 2 (つづき)

化合物 番号	R <sup>1</sup>	R <sup>4</sup>	R <sup>5</sup>	R <sup>6</sup>	R <sup>7</sup>	$\langle A \rangle$
969		-H		-H		
970				-H		
971				-H		
972				-H		

表 - 2 (つづき)

化合物番号	R <sup>1</sup>	R <sup>4</sup>	R <sup>5</sup>	R <sup>6</sup>	R <sup>7</sup>
973		-H	-CH <sub>3</sub>	-H	
974		-H	-CH <sub>3</sub>	-H	
975		-H	-CH <sub>2</sub> CH <sub>2</sub> CH <sub>3</sub>	-H	
976		-H	-CH <sub>2</sub> CH <sub>2</sub> CH <sub>3</sub>	-H	

表 - 2 (つづき)

化合物 番号	R <sup>1</sup>	R <sup>4</sup>	R <sup>5</sup>	R <sup>6</sup>	R <sup>7</sup>
977		-H	-CH(CH <sub>3</sub> ) <sub>2</sub>	-H	
978		-H	-CH(CH <sub>3</sub> ) <sub>2</sub>	-H	
979		-H	-CH <sub>2</sub> CH <sub>2</sub> CH <sub>2</sub> CH <sub>3</sub>	-H	
980		-H	-CH <sub>2</sub> CH <sub>2</sub> CH <sub>2</sub> CH <sub>3</sub>	-H	

表 - 2 (つづき)

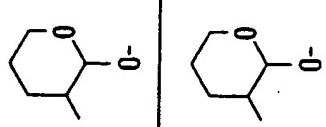
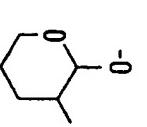
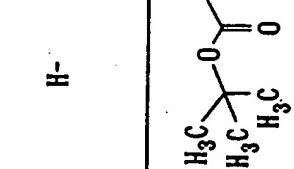
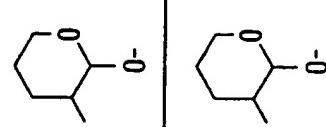
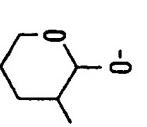
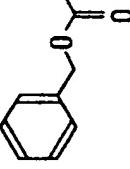
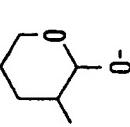
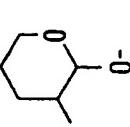
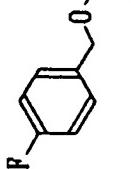
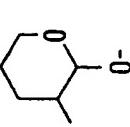
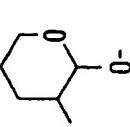
化合物 番号	R <sup>1</sup>	R <sup>4</sup>	R <sup>5</sup>	R <sup>6</sup>	R <sup>7</sup>	
981	H-	-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H		
982		-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H		
983		-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H		
984		-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H		

表 - 2 (つづき)

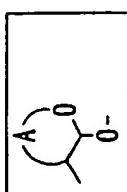
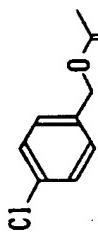
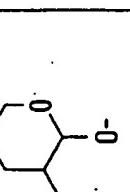
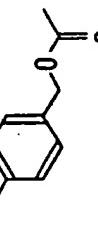
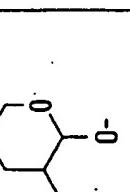
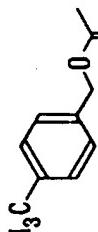
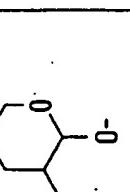
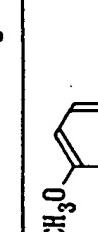
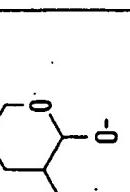
化合物 番号	R <sup>1</sup>	R <sup>4</sup>	R <sup>5</sup>	R <sup>6</sup>	R <sup>7</sup>	
985		-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>			
986		-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H		
987		-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H		
988		-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H		

表 - 2 (つづき)

化合物番号	R <sup>1</sup>	R <sup>4</sup>	R <sup>5</sup>	R <sup>6</sup>	R <sup>7</sup>	
989		-H		-H		
990		-H		-H		
991		-H		-H		
992		-H		-H		

表 - 2 (つづき)

化合物 番号	R <sup>1</sup>	R <sup>4</sup>	R <sup>5</sup>	R <sup>6</sup>	R <sup>7</sup>
993		-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H	
994		-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H	
995		-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H	
996		-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H	

表 - 2 (つづき)

化合物番号	R <sup>1</sup>	R <sup>4</sup>	R <sup>5</sup>	R <sup>6</sup>	R <sup>7</sup>	
997		-H	$-\text{CH}_2\text{CH}(\text{CH}_3)_2$	-H		
998		-H	$-\text{CH}_2\text{CH}(\text{CH}_3)_2$	-H		
999		-H	$-\text{CH}_2\text{CH}(\text{CH}_3)_2$	-H		
1000		-H	$-\text{CH}_2\text{CH}(\text{CH}_3)_2$	-H		

表 - 2 (つづき)

化合物番号	R <sup>1</sup>	R <sup>4</sup>	R <sup>5</sup>	R <sup>6</sup>	R <sup>7</sup>
1001		-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H	
1002		-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H	
1003		-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H	
1004		-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H	

表 - 2 (つづき)

化合物番号	R <sup>1</sup>	R <sup>4</sup>	R <sup>5</sup>	R <sup>6</sup>	R <sup>7</sup>	A
1005		-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H		
1006		-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H		
1007		-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H		
1008		-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H		

表 - 2 (つづき)

化合物 番号	R <sup>1</sup>	R <sup>4</sup>	R <sup>5</sup>	R <sup>6</sup>	R <sup>7</sup>	$\text{A}^{\circ}$
1009	<chem>CH3Oc1ccc(C(=O)C)cc1</chem>	-H	$-\text{CH}_2\text{CH}(\text{CH}_3)_2$	-H	$\text{CH}_3$ C(=O)	<chem>CC1(OCCOC)CCC1</chem>
1010	<chem>CH3Oc1ccc(C(=O)C)cc1</chem>	-H	$-\text{CH}_2\text{CH}(\text{CH}_3)_2$	-H	$\text{CH}_3$ C(=O)	<chem>CC1(OCCOC)CCC1</chem>
1011	<chem>c1ccncc1</chem>	-H	$-\text{CH}_2\text{CH}(\text{CH}_3)_2$	-H	$\text{CH}_3$ C(=O)	<chem>CC1(OCCOC)CCC1</chem>
1012	<chem>c1ccncc1</chem>	-H	$-\text{CH}_2\text{CH}(\text{CH}_3)_2$	-H	$\text{CH}_3$ C(=O)	<chem>CC1(OCCOC)CCC1</chem>

表 - 2 (つづき)

化合物 番号	R <sup>1</sup>	R <sup>4</sup>	R <sup>5</sup>	R <sup>6</sup>	R <sup>7</sup>	A
1013		-H	$-\text{CH}_2\text{CH}(\text{CH}_3)_2$	-H	$\text{CH}_3$	
1014		-H	$-\text{CH}_2\text{CH}(\text{CH}_3)_2$	-H	$\text{CH}_3$	
1015		-H	$-\text{CH}_2\text{CH}(\text{CH}_3)_2$	-H	$\text{CH}_3$	
1016	$\text{H}_3\text{C}-\text{S}-$	$=\text{O}$	$-\text{CH}_2\text{CH}(\text{CH}_3)_2$	-H	$\text{CH}_3$	

表 - 2 (つづき)

化合物番号	R <sup>1</sup>	R <sup>4</sup>	R <sup>5</sup>	R <sup>6</sup>	R <sup>7</sup>	
1017		-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H		
1018		-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H		
1019		-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H		
1020		-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H		

表 - 2 (つづき)

化合物番号	R <sup>1</sup>	R <sup>4</sup>	R <sup>5</sup>	R <sup>6</sup>	R <sup>7</sup>	(A)
1021		-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H		
1022		-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H		
1023		-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H		
1024		-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H		

表 - 2 (つづき)

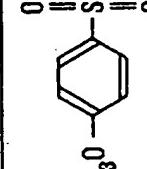
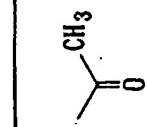
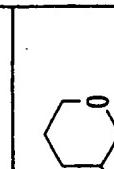
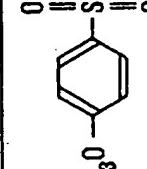
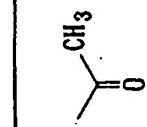
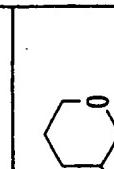
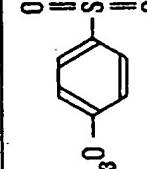
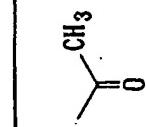
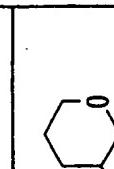
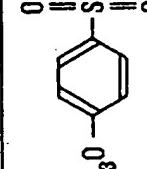
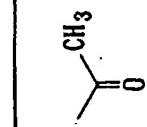
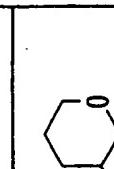
化合物番号	R <sup>1</sup>	R <sup>4</sup>	R <sup>5</sup>	R <sup>6</sup>	R <sup>7</sup>	
1025		-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H		
1026		-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H		
1027		-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H		
1028		-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H		

表 - 2 (つづき)

化合物 番号	R <sup>1</sup>	R <sup>4</sup>	R <sup>5</sup>	R <sup>6</sup>	R <sup>7</sup>	
1029		-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H		
1030		-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H		
1031	H-	-H	-CH <sub>2</sub> -phenyl	-H		
1032				-H		

表 - 2 (つづき)

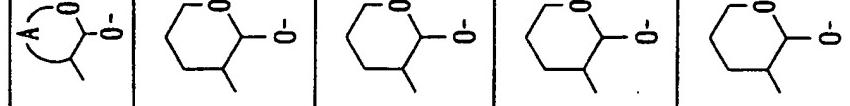
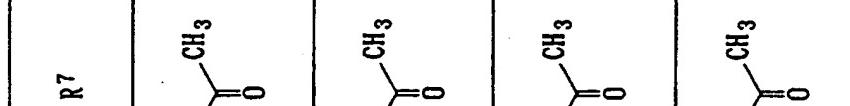
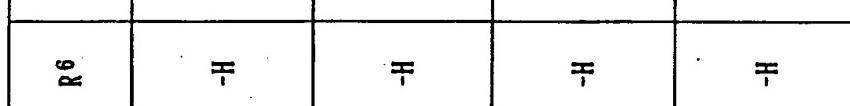
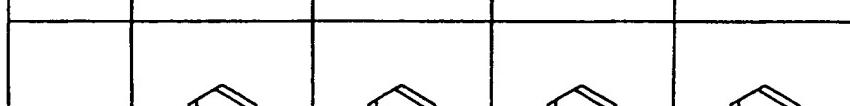
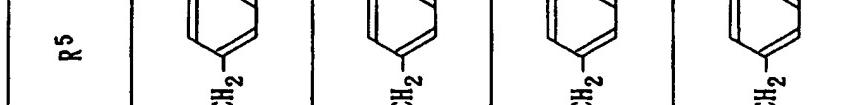
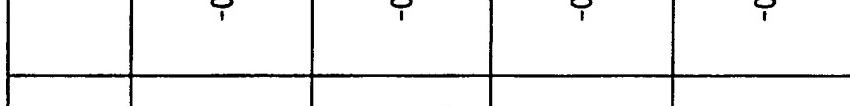
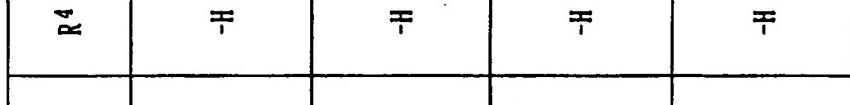
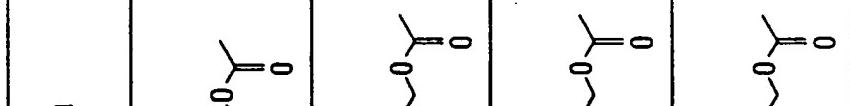
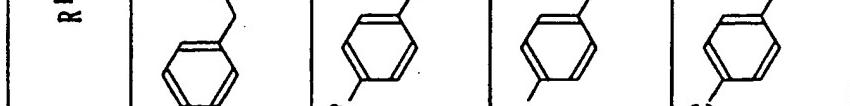
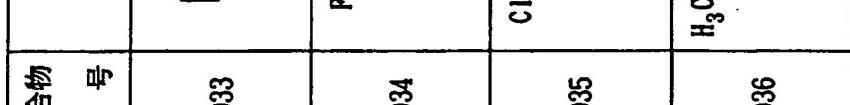
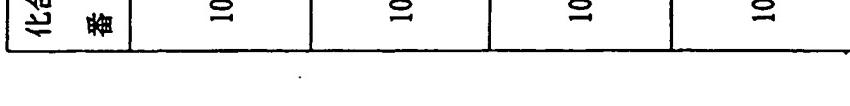
化合物 番号	R <sup>1</sup>	R <sup>4</sup>	R <sup>5</sup>	R <sup>6</sup>	R <sup>7</sup>	
1033		-H		-H		
1034		-H		-H		
1035		-H		-H		
1036		-H		-H		

表 - 2 (つづき)

化合物 番号	R <sup>1</sup>	R <sup>4</sup>	R <sup>5</sup>	R <sup>6</sup>	R <sup>7</sup>	$\text{A}^{\wedge}$
1037	<chem>CH3Oc1ccc(CC(=O)OC)c(C)c1</chem>	-H	<chem>-CH2-c1ccccc1</chem>	-H	<chem>CC(=O)C</chem>	<chem>CC1CCCC1[O-]</chem>
1038	<chem>c1ccccc1</chem>	-H	<chem>-CH2-c1ccccc1</chem>	-H	<chem>CC(=O)C</chem>	<chem>CC1CCCC1[O-]</chem>
1039	<chem>c1ccccc1</chem>	-H	<chem>CC(=O)OC</chem>	-H	<chem>CC(=O)C</chem>	<chem>CC1CCCC1[O-]</chem>
1040	<chem>CH3Oc1ccc(CC(=O)OC)c(C)c1</chem>			-H	<chem>CC(=O)C</chem>	<chem>CC1CCCC1[O-]</chem>

表 - 2 (つづき)

化合物番号	R <sup>1</sup>	R <sup>4</sup>	R <sup>5</sup>	R <sup>6</sup>	R <sup>7</sup>	$\text{A}^{\circ}$
1041		-H		-H		
1042				-H		
1043				-H		
1044				-H		

表 - 2 (つづき)

化合物 番号	R <sup>1</sup>	R <sup>4</sup>	R <sup>5</sup>	R <sup>6</sup>	R <sup>7</sup>
1045		-H		-H	
1046		-H		-H	
1047		-H		-H	
1048				-H	

表 - 2 (つづき)

化合物 番号	R <sup>1</sup>	R <sup>4</sup>	R <sup>5</sup>	R <sup>6</sup>	R <sup>7</sup>
1049		-H		-H	
1050			-H		-H
1051			-H		
1052				-H	

表 - 2 (つづき)

化合物番号	R <sup>1</sup>	R <sup>4</sup>	R <sup>5</sup>	R <sup>6</sup>	R <sup>7</sup>
1053		-H	-CH <sub>2</sub> CH <sub>2</sub> SCH <sub>3</sub>	-H	
1054		-H	-CH <sub>2</sub> CH <sub>2</sub> SCH <sub>3</sub>	-H	
1055		-H	-CH <sub>2</sub> OC(CH <sub>3</sub> ) <sub>3</sub>	-H	
1056		-H	-CH <sub>2</sub> OC(CH <sub>3</sub> ) <sub>3</sub>	-H	

表 - 2 (つづき)

化合物 番号	R1	R4	R5	R6	R7	
1057		-H	-CH2OH	-H		
1058			-H	-CH2OH		
1059			-H			
1060			-H			

表 - 2 (つづき)

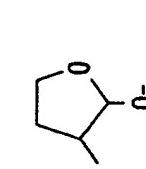
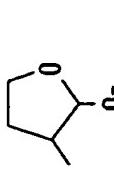
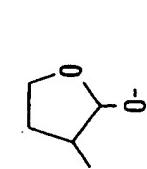
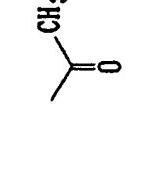
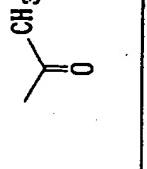
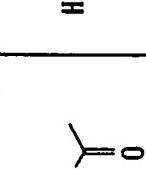
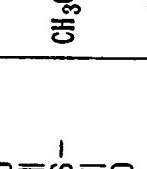
化合物番号	R <sup>1</sup>	R <sup>4</sup>	R <sup>5</sup>	R <sup>6</sup>	R <sup>7</sup>	
1061		H-	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	CH <sub>3</sub> CO-		
1062			CH <sub>3</sub> CO-	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	H-	
1063			CH <sub>3</sub> CO-	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	H-	
1064			CH <sub>3</sub> CO-	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	H-	

表 - 2 (つづき)

化合物番号	R <sup>1</sup>	R <sup>4</sup>	R <sup>5</sup>	R <sup>6</sup>	R <sup>7</sup>	A
1065			-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	H-		
1066			-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	H-		
1067			-CH <sub>2</sub> -Ph	H-		
1068			-CH <sub>2</sub> -Ph	H-		

表 - 2 (つづき)

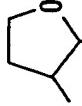
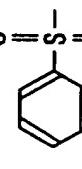
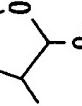
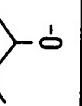
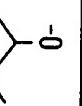
化合物番号	R <sup>1</sup>	R <sup>4</sup>	R <sup>5</sup>	R <sup>6</sup>	R <sup>7</sup>	
1069				H-		
1070				H-		
1389			-H			
1390			-H		-H	

表 - 2 (つづき)

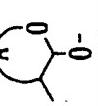
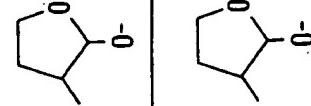
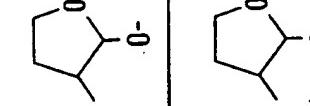
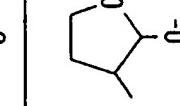
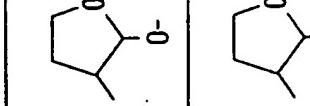
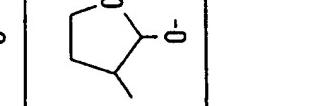
化合物番号	R <sup>1</sup>	R <sup>4</sup>	R <sup>5</sup>	R <sup>6</sup>	R <sup>7</sup>	
1391		-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H		
1392		-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H		
1393		-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H		
1394		-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H		

表 - 2 (つづき)

化合物番号	R1	R4	R5	R6	R7	$\text{A}^{\prime}$
1395		-H	$-\text{CH}_2\text{CH}(\text{CH}_3)_2$	-H		
1396		-H	$-\text{CH}_2\text{CH}(\text{CH}_3)_2$	-H		
1397		-H	$-\text{CH}_2\text{CH}(\text{CH}_3)_2$	-H		
1398		-H	$-\text{CH}_2\text{CH}(\text{CH}_3)_2$	-H		

2 3 4

表 - 3 (n = 1 の場合)

化合物番号	R <sup>1</sup>	R <sup>2</sup>	R <sup>3</sup>	R <sup>4</sup>	R <sup>5</sup>	R <sup>6</sup>
1071		-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H	-H	
1072		-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H	-CH <sub>3</sub>	
1073		-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H	-CH <sub>2</sub> CH <sub>2</sub> CH <sub>3</sub>	-H
1074		-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H	-CH(CH <sub>3</sub> ) <sub>2</sub>	-H

表 - 3 (つづき)

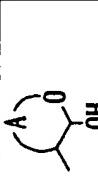
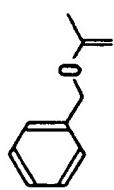
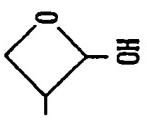
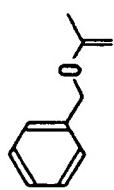
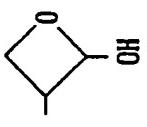
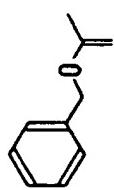
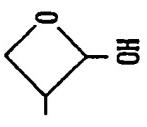
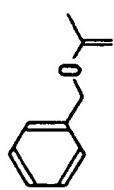
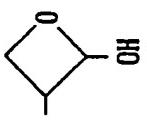
化合物 番号	R <sup>1</sup>	R <sup>2</sup>	R <sup>3</sup>	R <sup>4</sup>	R <sup>5</sup>	R <sup>6</sup>	
1075		-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H	-CH <sub>2</sub> CH <sub>2</sub> CH <sub>2</sub> CH <sub>3</sub>	-H	
1076		-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H	
1077		-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H	
1078		-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H	

表 - 3 (つづき)

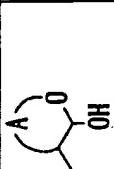
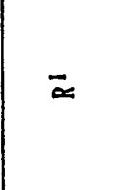
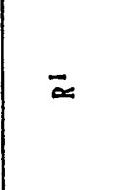
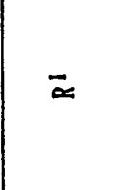
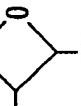
化合物 番号	R <sup>1</sup>	R <sup>2</sup>	R <sup>3</sup>	R <sup>4</sup>	R <sup>5</sup>	R <sup>6</sup>	
1079		-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H	-CH <sub>2</sub> 	-H	
1080		-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H	-CH <sub>2</sub> CH <sub>2</sub> SCH <sub>3</sub>	-H	
1081		-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H	-CH <sub>2</sub> OH	-H	
1082		-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H		-H	

表 - 3 (つづき)

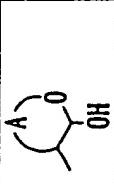
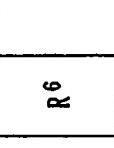
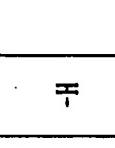
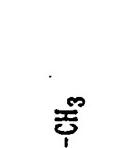
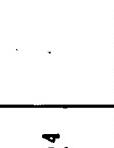
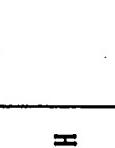
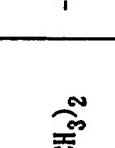
化合物 番号	R <sup>1</sup>	R <sup>2</sup>	R <sup>3</sup>	R <sup>4</sup>	R <sup>5</sup>	R <sup>6</sup>	
1083		-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H	-H	-H	
1084		-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H	-CH <sub>3</sub>	-H	
1085		-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H	-CH <sub>2</sub> CH <sub>3</sub>	-H	
1086		-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H	-CH <sub>2</sub> CH <sub>2</sub> CH <sub>3</sub>	-H	

表 - 3 (つづき)

化合物 番号	R <sup>1</sup>	R <sup>2</sup>	R <sup>3</sup>	R <sup>4</sup>	R <sup>5</sup>	R <sup>6</sup>	A
1087		-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H	-CH(CH <sub>3</sub> ) <sub>2</sub>	-H	
1088		-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H	-CH <sub>2</sub> CH <sub>2</sub> CH <sub>2</sub> CH <sub>3</sub>	-H	
1089		-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H		-H	
1090		-H	-H	-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H	

表 - 3 (つづき)

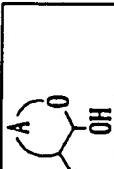
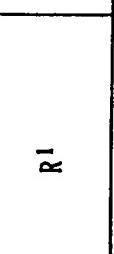
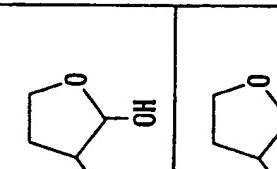
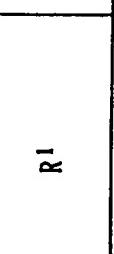
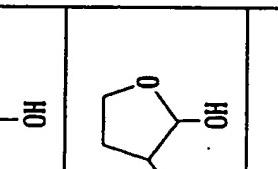
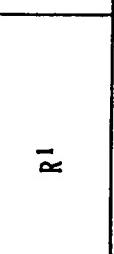
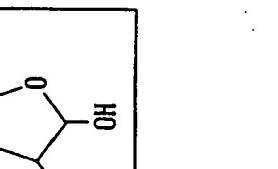
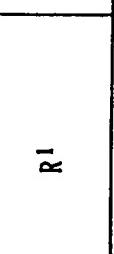
化合物 番号	R <sup>1</sup>	R <sup>2</sup>	R <sup>3</sup>	R <sup>4</sup>	R <sup>5</sup>	R <sup>6</sup>	
1091		-H	-CH <sub>3</sub>	-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H	
1092		-H	-CH <sub>2</sub> CH <sub>2</sub> CH <sub>3</sub>	-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H	
1093		-H	-CH(CH <sub>3</sub> ) <sub>2</sub>	-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H	
1094		-H	-CH <sub>2</sub> CH <sub>2</sub> CH <sub>2</sub> CH <sub>3</sub>	-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H	

表 - 3 (つづき)

化合物番号	R <sup>1</sup>	R <sup>2</sup>	R <sup>3</sup>	R <sup>4</sup>	R <sup>5</sup>	R <sup>6</sup>
1095	-H	-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H
1096	H <sub>3</sub> C H <sub>3</sub> C H <sub>3</sub> C	0    0	-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>
1097				-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>
1098				-CH <sub>3</sub>	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H

表 - 3 (つづき)

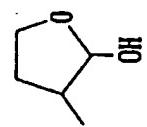
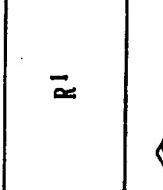
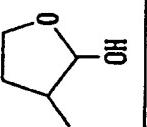
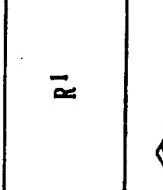
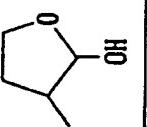
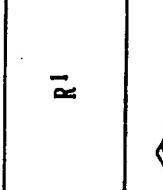
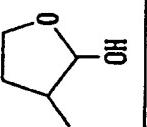
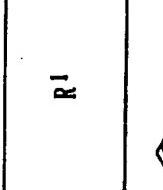
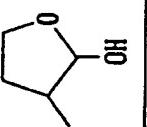
化合物 番号	R <sup>1</sup>	R <sup>2</sup>	R <sup>3</sup>	R <sup>4</sup>	R <sup>5</sup>	R <sup>6</sup>	
1099		-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-CH <sub>3</sub>	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H	
1100		-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-CH <sub>3</sub>	
1101		-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H	
1102		-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H	

表 - 3 (つづき)

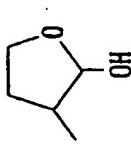
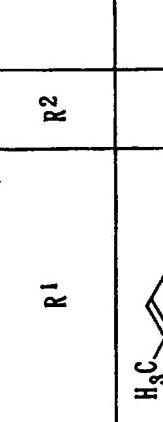
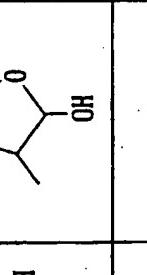
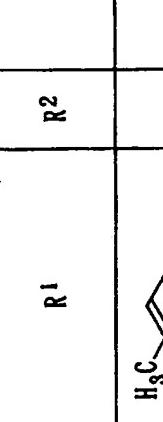
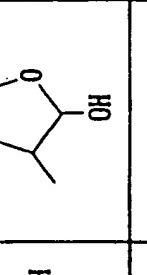
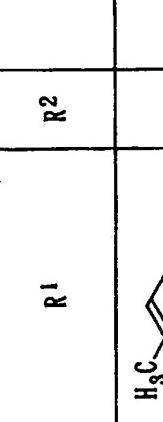
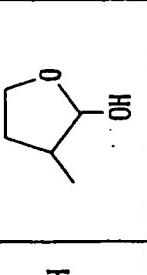
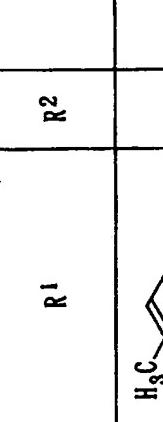
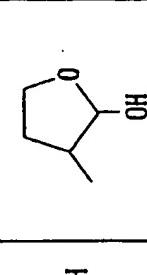
化合物 番号	R <sup>1</sup>	R <sup>2</sup>	R <sup>3</sup>	R <sup>4</sup>	R <sup>5</sup>	R <sup>6</sup>	
1103		-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H	
1104		-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H	
1105		-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H	
1106		-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H	

表 - 3 (つづき)

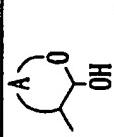
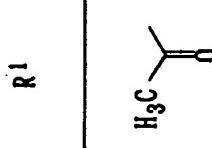
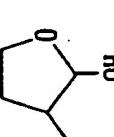
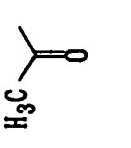
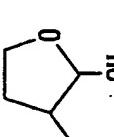
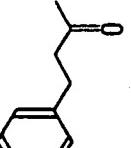
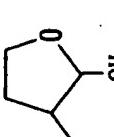
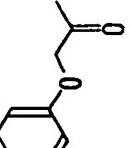
化合物 番号	R <sup>1</sup>	R <sup>2</sup>	R <sup>3</sup>	R <sup>4</sup>	R <sup>5</sup>	R <sup>6</sup>	
1107		-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H	
1108		-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H	
1109		-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H	
1110		-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H	

表 - 3 (つづき)

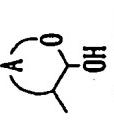
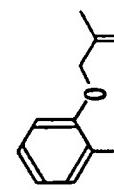
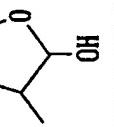
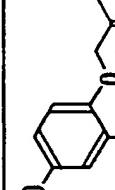
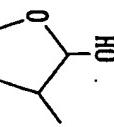
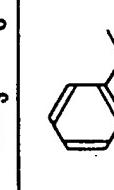
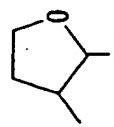
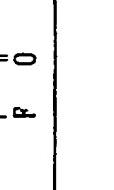
化合物 番号	R <sup>1</sup>	R <sup>2</sup>	R <sup>3</sup>	R <sup>4</sup>	R <sup>5</sup>	R <sup>6</sup>	
1111		-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H	
1112		-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H	
1113		-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H	
1114		-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H	

表 - 3 (-づき)

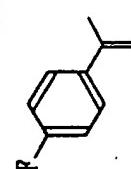
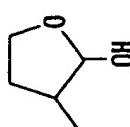
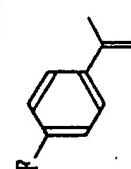
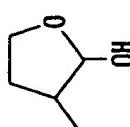
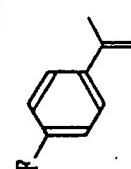
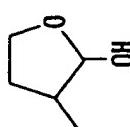
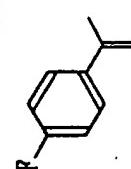
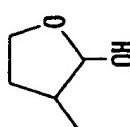
化合物番号	R <sup>1</sup>	R <sup>2</sup>	R <sup>3</sup>	R <sup>4</sup>	R <sup>5</sup>	R <sup>6</sup>	
1115		-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H	
1116		-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H	
1117		-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H	
1118		-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H	

表 - 3 (つづき)

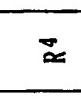
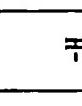
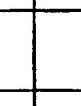
化合物 番号	R <sup>1</sup>	R <sup>2</sup>	R <sup>3</sup>	R <sup>4</sup>	R <sup>5</sup>	R <sup>6</sup>
1119		-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H
1120		-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H
1121		-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H
1122		-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H

表 - 3 (つづき)

化合物 番号	R <sup>1</sup>	R <sup>2</sup>	R <sup>3</sup>	R <sup>4</sup>	R <sup>5</sup>	R <sup>6</sup>	
1123		-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H	
1124		-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H	
1125		-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H	
1126		-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H	

表 - 3 (つづき)

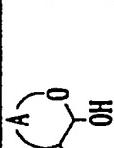
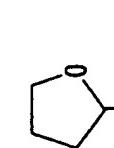
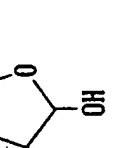
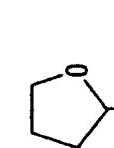
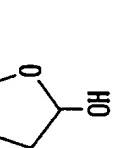
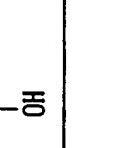
化合物 番号	R <sup>1</sup>	R <sup>2</sup>	R <sup>3</sup>	R <sup>4</sup>	R <sup>5</sup>	R <sup>6</sup>	
1127		-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H	
1128		-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H	
1129		-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H	
1130		-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H	

表 - 3 (つづき)

化合物番号	R <sup>1</sup>	R <sup>2</sup>	R <sup>3</sup>	R <sup>4</sup>	R <sup>5</sup>	R <sup>6</sup>
1131		-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H
1132		-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H
1133		-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H
1134		-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H

表 - 3 (つづき)

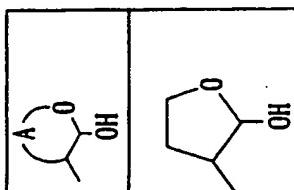
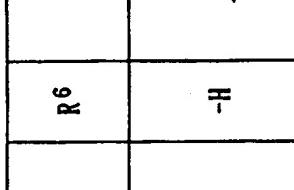
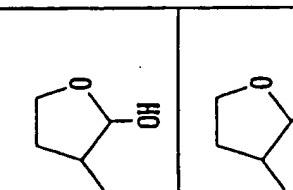
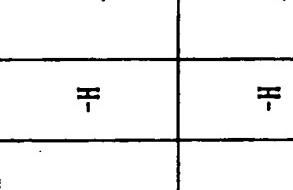
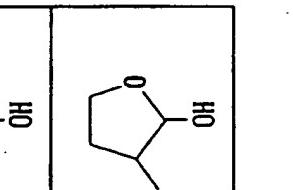
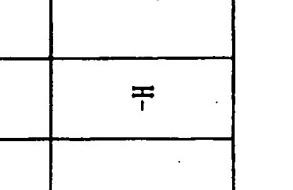
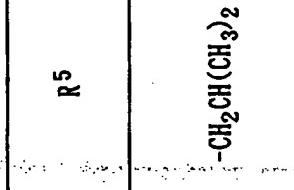
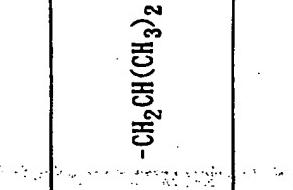
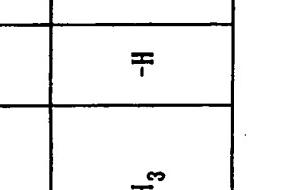
化合物番号	R <sup>1</sup>	R <sup>2</sup>	R <sup>3</sup>	R <sup>4</sup>	R <sup>5</sup>	R <sup>6</sup>	
1135		-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H	
1136		-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H	
1137		-H		-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H	
1138		-H		-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H	

表 - 3 (つづき)

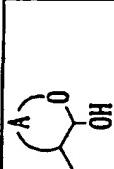
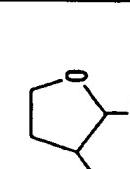
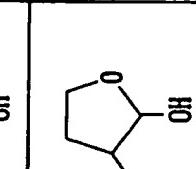
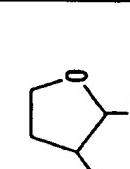
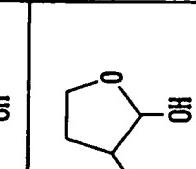
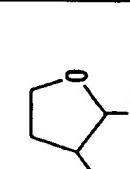
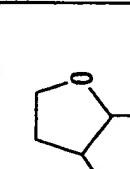
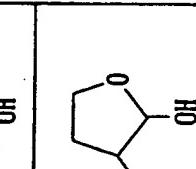
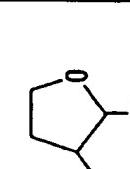
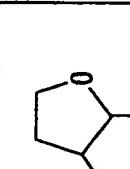
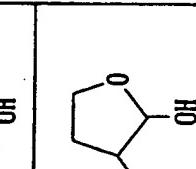
化合物 番号	R <sup>1</sup>	R <sup>2</sup>	R <sup>3</sup>	R <sup>4</sup>	R <sup>5</sup>	R <sup>6</sup>	
1139		-H	-CH <sub>2</sub> OCH(CH <sub>3</sub> ) <sub>3</sub>	-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H	
1140		-H	-CH <sub>2</sub> OH	-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H	
1141		-H		-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H	
1142		-H		-H		-H	

表 - 3 (つづき)

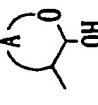
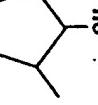
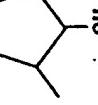
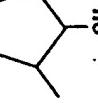
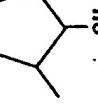
化合物 番号	R <sup>1</sup>	R <sup>2</sup>	R <sup>3</sup>	R <sup>4</sup>	R <sup>5</sup>	R <sup>6</sup>	
1143		-H	-CH <sub>3</sub>	-H	-CH <sub>2</sub> - phenyl	-H	
1144		-H	-CH <sub>2</sub> CH <sub>2</sub> CH <sub>3</sub>	-H	-CH <sub>2</sub> - phenyl	-H	
1145		-H	-CH(CH <sub>3</sub> ) <sub>2</sub>	-H	-CH <sub>2</sub> - phenyl	-H	
1146		-H	-CH <sub>2</sub> CH <sub>2</sub> CH <sub>2</sub> CH <sub>3</sub>	-H	-CH <sub>2</sub> - phenyl	-H	

表 - 3 (つづき)

化合物 番号	R <sup>1</sup>	R <sup>2</sup>	R <sup>3</sup>	R <sup>4</sup>	R <sup>5</sup>	R <sup>6</sup>	A
1147		-H		-H		-H	
1148		-H		-H		-H	
1149		-H		-H		-H	
1150		-H		-H		-H	

表 - 3 (つづき)

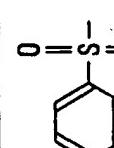
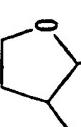
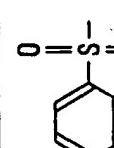
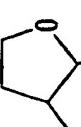
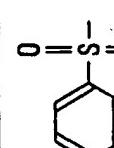
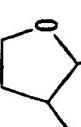
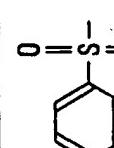
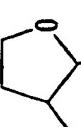
化合物 番号	R <sup>1</sup>	R <sup>2</sup>	R <sup>3</sup>	R <sup>4</sup>	R <sup>5</sup>	R <sup>6</sup>	
1151		-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H	-CH <sub>2</sub> - 	-H	
1152		-H	-CH <sub>2</sub> CH <sub>2</sub> SCN <sub>3</sub>	-H	-CH <sub>2</sub> - 	-H	
1153		-H	-CH <sub>2</sub> OH	-H	-CH <sub>2</sub> - 	-H	
1154		-H	-CH <sub>2</sub> OC(=O)C <sub>2</sub> H <sub>5</sub>	-H	-CH <sub>2</sub> - 	-H	

表 - 3 (つづき)

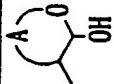
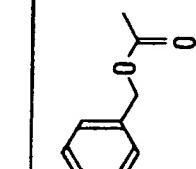
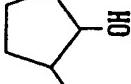
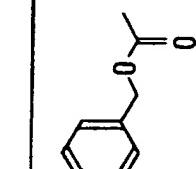
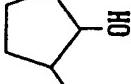
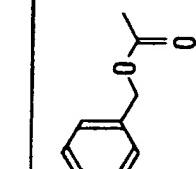
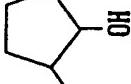
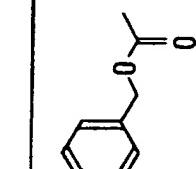
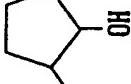
化合物 番号	R <sup>1</sup>	R <sup>2</sup>	R <sup>3</sup>	R <sup>4</sup>	R <sup>5</sup>	R <sup>6</sup>	
1155		-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H	-CH <sub>2</sub> CH <sub>2</sub> SCH <sub>3</sub>	-H	
1156		-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H	-CH <sub>2</sub> CH <sub>2</sub> SCH <sub>3</sub>	-H	
1157		-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H	-CH <sub>2</sub> OH	-H	
1158		-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H	-CH <sub>2</sub> OH	-H	

表 - 3 (つづき)

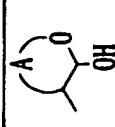
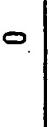
化合物 番号	R <sup>1</sup>	R <sup>2</sup>	R <sup>3</sup>	R <sup>4</sup>	R <sup>5</sup>	R <sup>6</sup>	
1159		-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H		-H	
1160		-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H		-H	
1161		-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H	-H	-H	
1162		-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H	-H	-CH <sub>3</sub>	

表 - 3 (つづき)

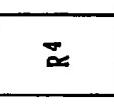
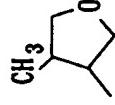
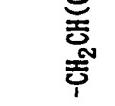
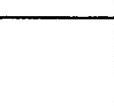
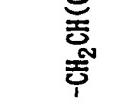
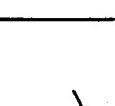
化合物 番号	R <sup>1</sup>	R <sup>2</sup>	R <sup>3</sup>	R <sup>4</sup>	R <sup>5</sup>	R <sup>6</sup>	
1163		-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H	-CH <sub>2</sub> CH <sub>2</sub> CH <sub>3</sub>	-H	
1164		-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H	-CH(CH <sub>3</sub> ) <sub>2</sub>	-H	
1165		-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H	-CH <sub>2</sub> CH <sub>2</sub> CH <sub>2</sub> CH <sub>3</sub>	-H	
1166		-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H	

表 - 3 (つづき)

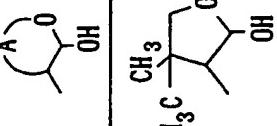
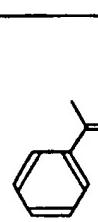
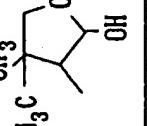
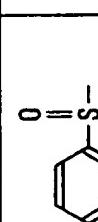
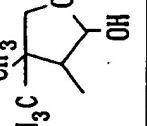
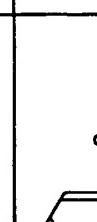
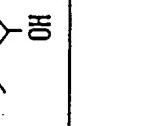
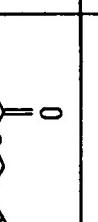
化合物 番号	R <sup>1</sup>	R <sup>2</sup>	R <sup>3</sup>	R <sup>4</sup>	R <sup>5</sup>	R <sup>6</sup>	
1167		-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H	CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H	
1168		-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H	
1169		-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H	
1170		-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H	-CH <sub>2</sub> CH <sub>2</sub> SCH <sub>3</sub>	-H	

表 - 3 (つづき)

化合物 番号	R <sup>1</sup>	R <sup>2</sup>	R <sup>3</sup>	R <sup>4</sup>	R <sup>5</sup>	R <sup>6</sup>	A
1171		-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H	-CH <sub>2</sub> OH	-H	
1172		-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H		-H	
1173		-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H	-H	-H	
1174		-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H	-CH <sub>3</sub>	-H	

表 - 3 (つづき)

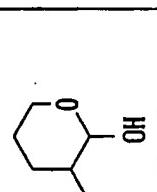
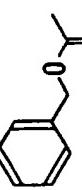
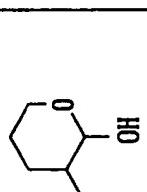
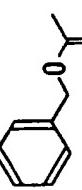
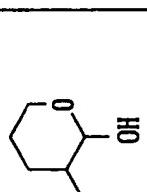
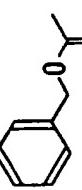
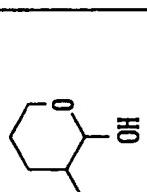
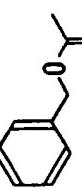
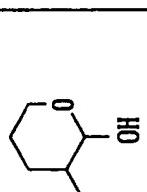
化合物 番号	R <sup>1</sup>	R <sup>2</sup>	R <sup>3</sup>	R <sup>4</sup>	R <sup>5</sup>	R <sup>6</sup>	
1175		-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H	-CH <sub>2</sub> CH <sub>2</sub> CH <sub>3</sub>	-H	
1176		-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H	-CH <sub>2</sub> CH <sub>2</sub> CH <sub>3</sub>	-H	
1177		-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H	-CH(CH <sub>3</sub> ) <sub>2</sub>	-H	
1178		-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H	CH <sub>2</sub> CH <sub>2</sub> CH <sub>2</sub> CH <sub>3</sub>	-H	

表 - 3 (つづき)

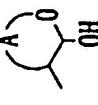
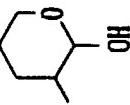
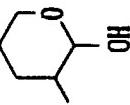
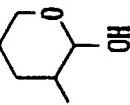
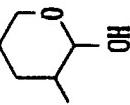
化合物 番号	R <sup>1</sup>	R <sup>2</sup>	R <sup>3</sup>	R <sup>4</sup>	R <sup>5</sup>	R <sup>6</sup>	
1179		-H	-H	-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H	
1180		-H	-H	-CH <sub>3</sub>	-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	
1181		-H	-H	-CH <sub>2</sub> CH <sub>3</sub>	-H	-CH <sub>2</sub> CH <sub>2</sub> CH <sub>3</sub>	
1182		-H	-H	-H	-CH <sub>2</sub> CH <sub>2</sub> CH <sub>3</sub>	-H	

表 - 3 (つづき)

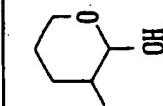
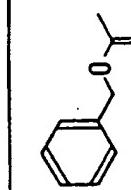
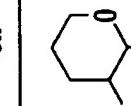
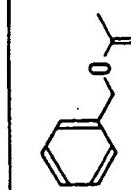
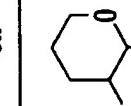
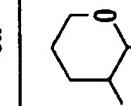
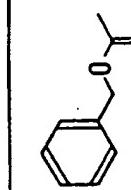
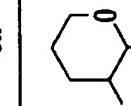
化合物 番号	R <sup>1</sup>	R <sup>2</sup>	R <sup>3</sup>	R <sup>4</sup>	R <sup>5</sup>	R <sup>6</sup>	
1183		-H	-CH(CH <sub>3</sub> ) <sub>2</sub>	-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H	
1184		-H	-CH <sub>2</sub> CH <sub>2</sub> CH <sub>2</sub> CH <sub>3</sub>	-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H	
1185	H-	-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H	
1186		-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H	

表 - 3 (つづき)

化合物番号	R <sup>1</sup>	R <sup>2</sup>	R <sup>3</sup>	R <sup>4</sup>	R <sup>5</sup>	R <sup>6</sup>
1187		-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H
1188		-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H
1189		-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H
1190		-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H

表 - 3 (つづき)

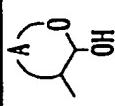
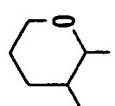
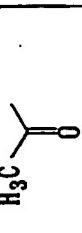
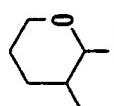
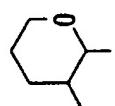
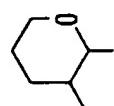
化合物 番号	R <sup>1</sup>	R <sup>2</sup>	R <sup>3</sup>	R <sup>4</sup>	R <sup>5</sup>	R <sup>6</sup>	
1191		-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H	
1192		-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H	
1193					-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H	
1194					-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H	

表 - 3 (つづき)

化合物 番号	R <sup>1</sup>	R <sup>2</sup>	R <sup>3</sup>	R <sup>4</sup>	R <sup>5</sup>	R <sup>6</sup>
1195		-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H
1196		-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H
1197		-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H
1198		-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H

表 - 3 (つづき)

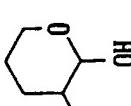
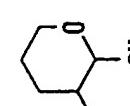
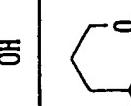
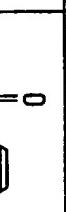
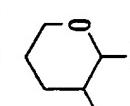
化合物 番号	R <sup>1</sup>	R <sup>2</sup>	R <sup>3</sup>	R <sup>4</sup>	R <sup>5</sup>	R <sup>6</sup>	$\text{A}^{\circ}$
1199	$\text{H}_3\text{C}-\overset{\text{O}}{\underset{\text{O}}{\text{S}}}-$	-H	$-\text{CH}_2\text{CH}(\text{CH}_3)_2$	-H	$-\text{CH}_2\text{CH}(\text{CH}_3)_2$	-H	
1200		-H	$-\text{CH}_2\text{CH}(\text{CH}_3)_2$	-H	$-\text{CH}_2\text{CH}(\text{CH}_3)_2$	-H	
1201		-H	$-\text{CH}_2\text{CH}(\text{CH}_3)_2$	-H	$-\text{CH}_2\text{CH}(\text{CH}_3)_2$	-H	
1202		-H	$-\text{CH}_2\text{CH}(\text{CH}_3)_2$	-H	$-\text{CH}_2\text{CH}(\text{CH}_3)_2$	-H	

表 - 3 (つづき)

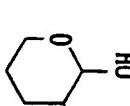
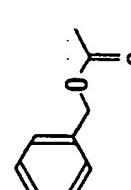
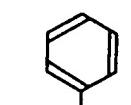
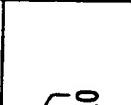
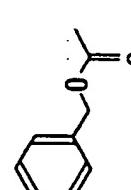
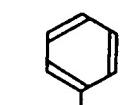
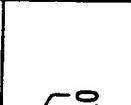
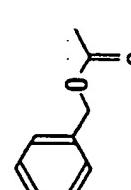
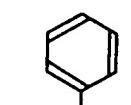
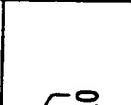
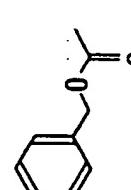
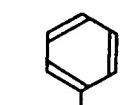
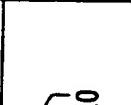
化合物番号	R <sup>1</sup>	R <sup>2</sup>	R <sup>3</sup>	R <sup>4</sup>	R <sup>5</sup>	R <sup>6</sup>	
1203		-H		-H		-H	
1204		-H		-H		-H	
1205		-H		-H		-H	
1206		-H		-H		-H	

表 - 3 (つづき)

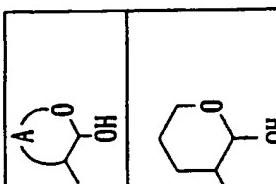
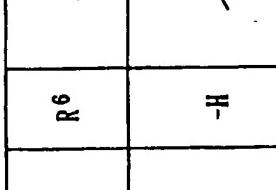
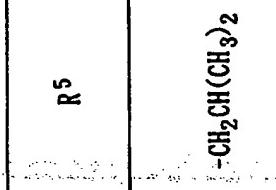
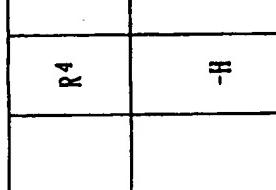
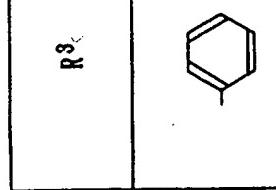
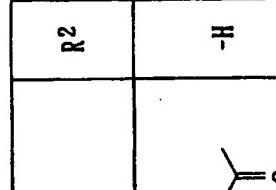
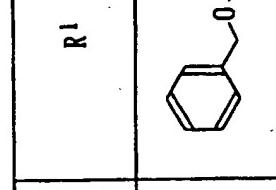
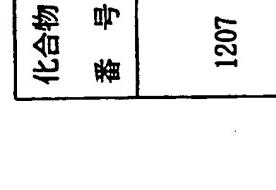
化合物 番号	R <sup>1</sup>	R <sup>2</sup>	R <sup>3</sup>	R <sup>4</sup>	R <sup>5</sup>	R <sup>6</sup>	
1207		-H			-H		
1208		-H		-H	-CH <sub>2</sub> -C <sub>6</sub> H <sub>4</sub> -	-H	
1209		-H		-CH <sub>3</sub>	-H		
1210		-H			-CH <sub>2</sub> CH <sub>2</sub> CH <sub>3</sub>	-H	

表 - 3 (つづき)

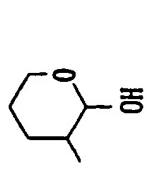
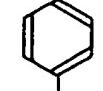
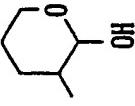
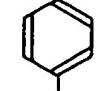
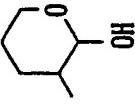
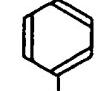
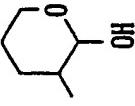
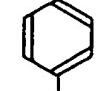
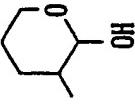
化合物 番号	R <sup>1</sup>	R <sup>2</sup>	R <sup>3</sup>	R <sup>4</sup>	R <sup>5</sup>	R <sup>6</sup>	
1211		-H	-CH(CH <sub>3</sub> ) <sub>2</sub>	-H		-H	
1212		-H	-CH <sub>2</sub> CH <sub>2</sub> CH <sub>2</sub> CH <sub>3</sub>	-H		-H	
1213		-H	-CH(CH <sub>3</sub> ) <sub>2</sub>	-H		-H	
1214		-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H		-H	

表 - 3 (つづき)

化合物 番号	R <sup>1</sup>	R <sup>2</sup>	R <sup>3</sup>	R <sup>4</sup>	R <sup>5</sup>	R <sup>6</sup>	$\text{A}^{\circ}$
1215		-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H		-H	
1216		-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H		-H	
1217		-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H		-H	
1218		-H	-CH <sub>2</sub> CH <sub>2</sub> SCH <sub>3</sub>	-H		-H	

表 - 3 (つづき)

化合物番号	R <sup>1</sup>	R <sup>2</sup>	R <sup>3</sup>	R <sup>4</sup>	R <sup>5</sup>	R <sup>6</sup>	A
1219		-H	-CH <sub>2</sub> OH	-H		-H	
1220		-H		-H		-H	
1221		-H		-H		-H	
1222		-H		-H		-H	

表 - 3 (つづき)

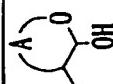
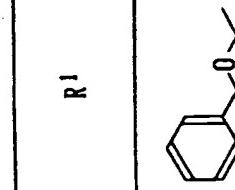
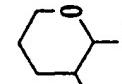
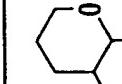
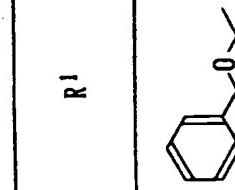
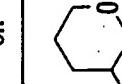
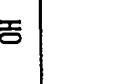
化合物 番号	R <sup>1</sup>	R <sup>2</sup>	R <sup>3</sup>	R <sup>4</sup>	R <sup>5</sup>	R <sup>6</sup>	
1223		-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H	-CH <sub>2</sub> OH	-H	
1224		-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H	-CH <sub>2</sub> OH	-H	
1225		-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H	-CH <sub>2</sub> OH	-H	
1226		-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H	-CH <sub>2</sub> OH	-H	

表 - 4 (n = 1 の場合)

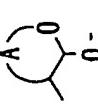
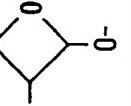
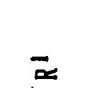
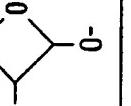
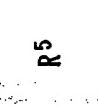
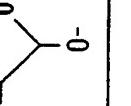
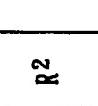
化合物番号	R <sup>1</sup>	R <sup>2</sup>	R <sup>3</sup>	R <sup>4</sup>	R <sup>5</sup>	R <sup>6</sup>	R <sup>7</sup>	
1227		-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H	-H	-H	-CH <sub>3</sub>	
1228		-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H	-CH <sub>3</sub>	-H	-CH <sub>3</sub>	
1229		-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H	-CH <sub>2</sub> CH <sub>2</sub> CH <sub>3</sub>	-H	-CH <sub>3</sub>	
1230		-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H	-CH(CH <sub>3</sub> ) <sub>2</sub>	-H	-CH <sub>3</sub>	

表 - 4 (つづき)

化合物 番号	R <sup>1</sup>	R <sup>2</sup>	R <sup>3</sup>	R <sup>4</sup>	R <sup>5</sup>	R <sup>6</sup>	R <sup>7</sup>
1231		-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H	-CH <sub>2</sub> CH <sub>2</sub> CH <sub>2</sub> CH <sub>3</sub>	-H	
1232		-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H	
1233		-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H	
1234					-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>

表 - 4 (つづき)

化合物番号	R <sup>1</sup>	R <sup>2</sup>	R <sup>3</sup>	R <sup>4</sup>	R <sup>5</sup>	R <sup>6</sup>	R <sup>7</sup>	A
1235		-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H		-H		
1236		-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H		-CH <sub>2</sub> CH <sub>2</sub> SCH <sub>3</sub>	-H	
1237		-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H		-CH <sub>2</sub> OH	-H	
1238		-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H		-CH <sub>2</sub> CH <sub>2</sub> SCH <sub>3</sub>	-H	

表 - 4 (つづき)

化合物番号	R <sup>1</sup>	R <sup>2</sup>	R <sup>3</sup>	R <sup>4</sup>	R <sup>5</sup>	R <sup>6</sup>	R <sup>7</sup>	$\text{A}^{\circ}$
1239		-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H	-H	-H		
1240		-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H	-CH <sub>3</sub>	-H		
1241		-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H	-CH <sub>2</sub> CH <sub>3</sub>	-H		
1242		-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H	-CH <sub>2</sub> CH <sub>2</sub> CH <sub>3</sub>	-H		

表 - 4 (つづき)

化合物 番号	R <sup>1</sup>	R <sup>2</sup>	R <sup>3</sup>	R <sup>4</sup>	R <sup>5</sup>	R <sup>6</sup>	R <sup>7</sup>
1243		-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H	-CH(CH <sub>3</sub> ) <sub>2</sub>	-H	
1244		-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H	-CH <sub>2</sub> CH <sub>2</sub> CH <sub>2</sub> CH <sub>3</sub>	-H	
1245		-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H		-H	
1246		-H	-H	-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H	

表 - 4 (つづき)

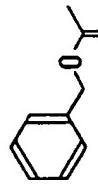
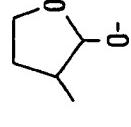
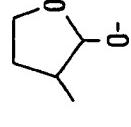
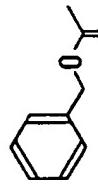
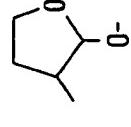
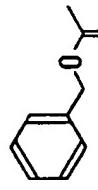
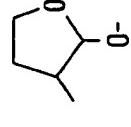
化合物番号	R <sup>1</sup>	R <sup>2</sup>	R <sup>3</sup>	R <sup>4</sup>	R <sup>5</sup>	R <sup>6</sup>	R <sup>7</sup>
1247		-H	-CH <sub>3</sub>	-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H	
1248		-H	-CH <sub>2</sub> CH <sub>2</sub> CH <sub>3</sub>	-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H	
1249		-H	-CH(CH <sub>3</sub> ) <sub>2</sub>	-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H	
1250		-H	-CH <sub>2</sub> CH <sub>2</sub> CH <sub>2</sub> CH <sub>3</sub>	-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H	

表 - 4 (つづき)

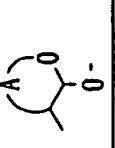
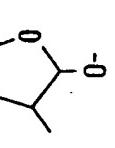
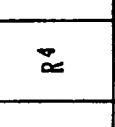
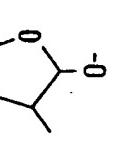
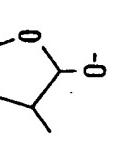
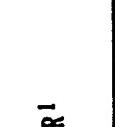
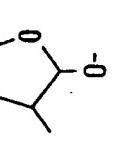
化合物番号	R <sup>1</sup>	R <sup>2</sup>	R <sup>3</sup>	R <sup>4</sup>	R <sup>5</sup>	R <sup>6</sup>	R <sup>7</sup>	
1251	H-	-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H		
1252		-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H		
1253		-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H		
1254		-CH <sub>3</sub>	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H		

表 - 4 (つづき)

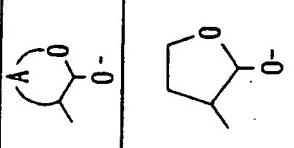
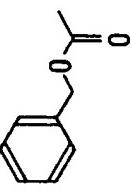
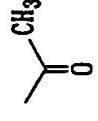
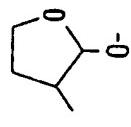
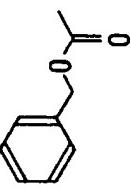
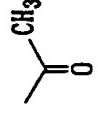
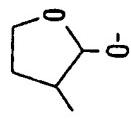
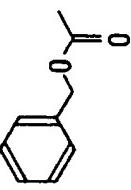
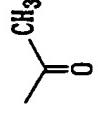
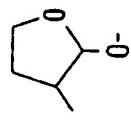
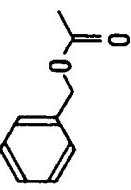
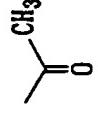
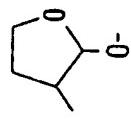
化合物番号	R <sup>1</sup>	R <sup>2</sup>	R <sup>3</sup>	R <sup>4</sup>	R <sup>5</sup>	R <sup>6</sup>	R <sup>7</sup>	
1255		-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-CH <sub>3</sub>	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H		
1256		-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-CH <sub>3</sub>		
1257		-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H		
1258		-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H		

表 - 4 (つづき)

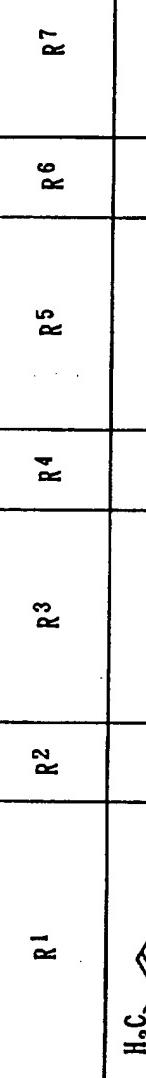
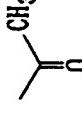
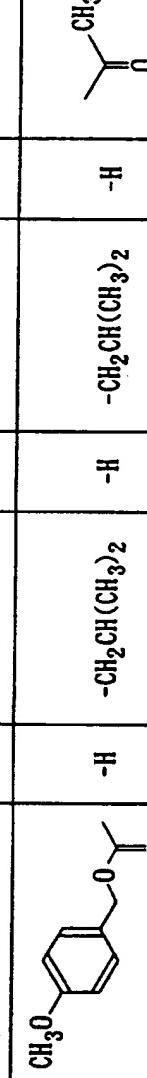
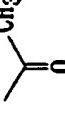
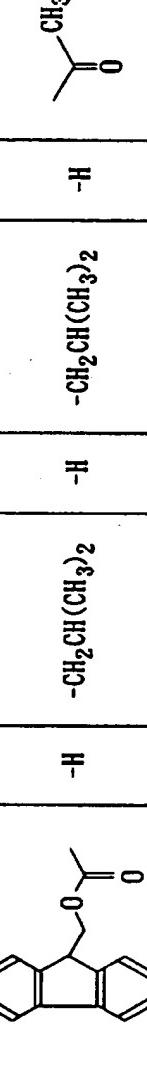
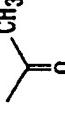
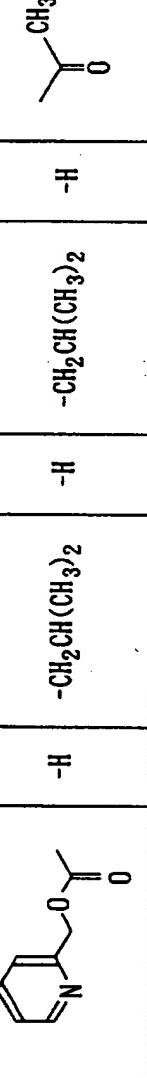
化合物番号	R <sup>1</sup>	R <sup>2</sup>	R <sup>3</sup>	R <sup>4</sup>	R <sup>5</sup>	R <sup>6</sup>	R <sup>7</sup>	
1259		-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H		
1260		-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H		
1261		-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H		
1262		-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H		

表 - 4 (つづき)

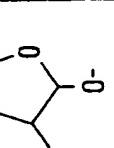
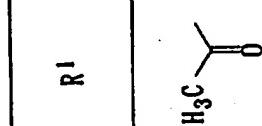
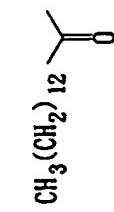
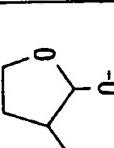
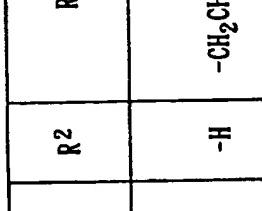
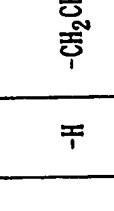
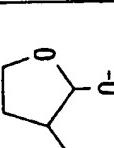
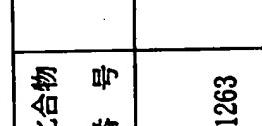
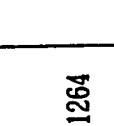
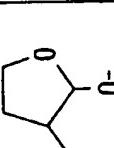
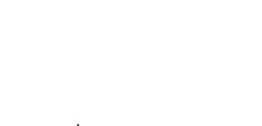
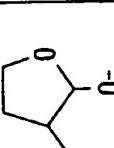
化合物番号	R <sup>1</sup>	R <sup>2</sup>	R <sup>3</sup>	R <sup>4</sup>	R <sup>5</sup>	R <sup>6</sup>	R <sup>7</sup>	
1263		-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H		
1264		-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H		
1265		-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H		
1266		-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H		

表 - 4 (つづき)

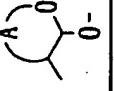
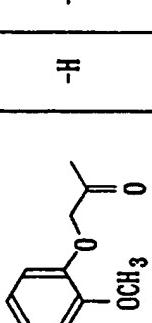
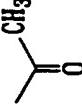
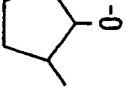
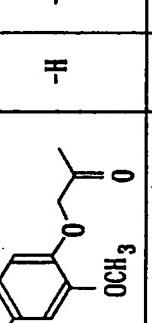
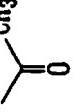
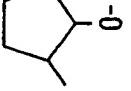
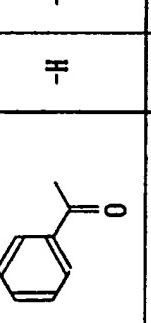
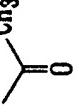
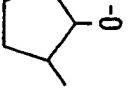
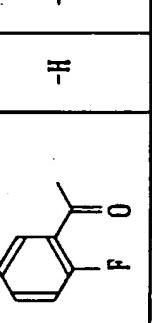
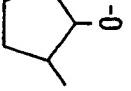
化合物番号	R <sup>1</sup>	R <sup>2</sup>	R <sup>3</sup>	R <sup>4</sup>	R <sup>5</sup>	R <sup>6</sup>	R <sup>7</sup>	
1267		-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H		
1268		-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H		
1269		-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H		
1270		-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H		

表 - 4 (つづき)

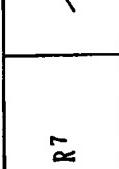
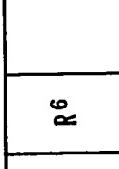
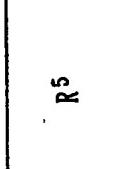
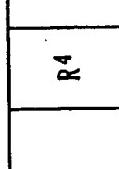
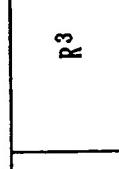
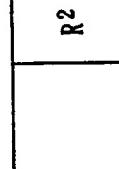
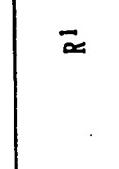
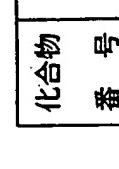
化合物番号	R <sup>1</sup>	R <sup>2</sup>	R <sup>3</sup>	R <sup>4</sup>	R <sup>5</sup>	R <sup>6</sup>	R <sup>7</sup>	
1271		-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H		
1272		-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H		
1273		-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H		
1274		-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H		

表 - 4 (つづき)

化合物 番号	R <sup>1</sup>	R <sup>2</sup>	R <sup>3</sup>	R <sup>4</sup>	R <sup>5</sup>	R <sup>6</sup>	R <sup>7</sup>
1275		-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H	
1276		-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H	
1277		-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H	
1278		-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H	

表 - 4 (つづき)

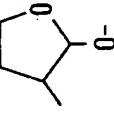
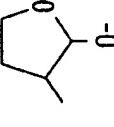
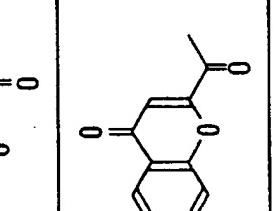
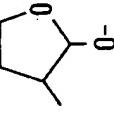
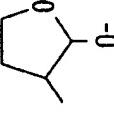
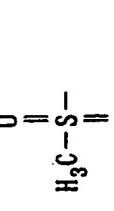
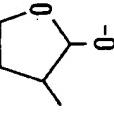
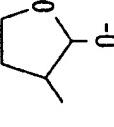
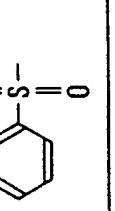
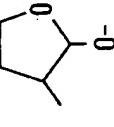
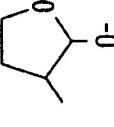
化合物 番号	R <sup>1</sup>	R <sup>2</sup>	R <sup>3</sup>	R <sup>4</sup>	R <sup>5</sup>	R <sup>6</sup>	R <sup>7</sup>	$\text{A}^{\wedge}$ 
1279		-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H		
1280		-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H		
1281	$\text{H}_3\text{C}-\text{S}-$ 	-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H		
1282		-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H		

表 - 4 (つづき)

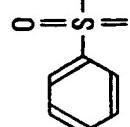
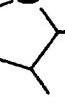
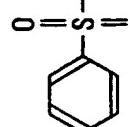
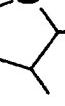
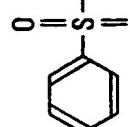
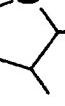
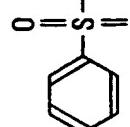
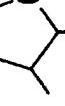
化合物番号	R <sup>1</sup>	R <sup>2</sup>	R <sup>3</sup>	R <sup>4</sup>	R <sup>5</sup>	R <sup>6</sup>	R <sup>7</sup>	(A)
1283		-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H		
1284		-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H		
1285		-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H		
1286		-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H		

表 - 4 (つづき)

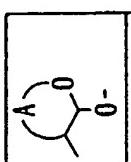
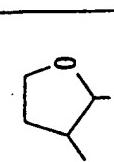
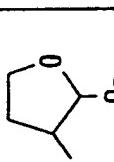
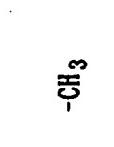
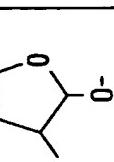
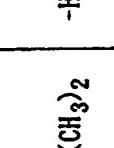
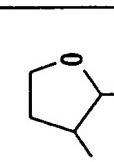
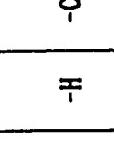
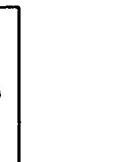
化合物番号	R <sup>1</sup>	R <sup>2</sup>	R <sup>3</sup>	R <sup>4</sup>	R <sup>5</sup>	R <sup>6</sup>	R <sup>7</sup>	
1287		-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H	-CH <sub>3</sub>	
1288		-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H	-C(CH <sub>3</sub> ) <sub>3</sub>	
1289		-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H	-CH <sub>3</sub>	
1290		-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H	-CH <sub>3</sub>	

表 - 4 (つづき)

化合物番号	R <sup>1</sup>	R <sup>2</sup>	R <sup>3</sup>	R <sup>4</sup>	R <sup>5</sup>	R <sup>6</sup>	R <sup>7</sup>	(A)
1291		-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H		
1292		-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H		
1293		-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H		
1294		-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H		

表 - 4 (つづき)

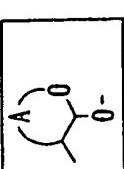
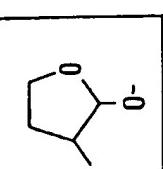
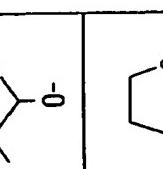
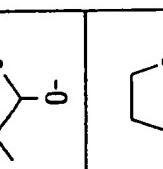
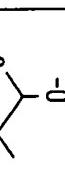
化合物番号	R <sup>1</sup>	R <sup>2</sup>	R <sup>3</sup>	R <sup>4</sup>	R <sup>5</sup>	R <sup>6</sup>	R <sup>7</sup>	
1295		-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H		
1296		-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H		
1297		-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H		
1298		-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H		

表 - 4 (つづき)

化合物番号	R <sup>1</sup>	R <sup>2</sup>	R <sup>3</sup>	R <sup>4</sup>	R <sup>5</sup>	R <sup>6</sup>	R <sup>7</sup>	$\text{C}^{\text{A}}\text{O}$ -O-
1299		-H		-H		-H		
1300		-H		-H		-H		
1301		-H		-H		-H		
1302		-H		-H		-H		

表 - 4 (つづき)

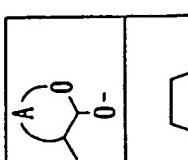
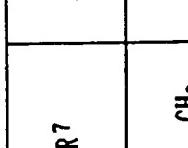
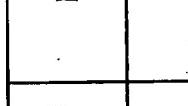
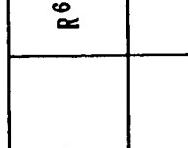
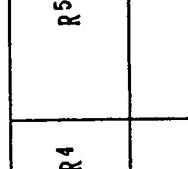
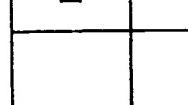
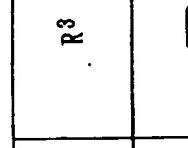
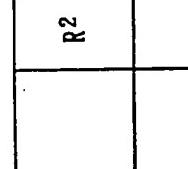
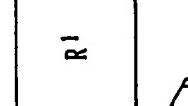
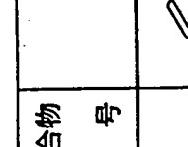
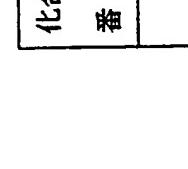
化合物 番号	R <sup>1</sup>	R <sup>2</sup>	R <sup>3</sup>	R <sup>4</sup>	R <sup>5</sup>	R <sup>6</sup>	R <sup>7</sup>	
1303		-H			-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H	
1304		-H	-H		-H	-CH <sub>2</sub> 	-H	
1305		-H	-CH <sub>3</sub>		-H	-CH <sub>2</sub> 	-H	
1306			-H	-CH <sub>2</sub> CH <sub>2</sub> CH <sub>3</sub>	-H	-CH <sub>2</sub> 	-H	

表 - 4 (つづき)

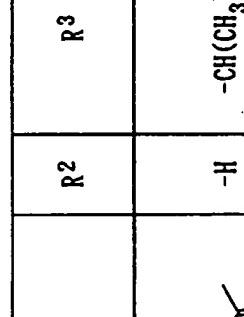
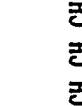
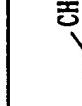
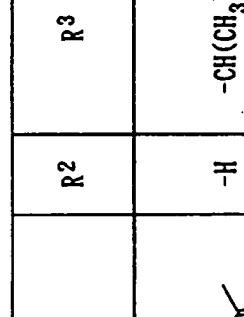
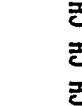
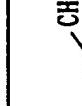
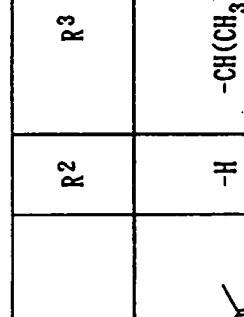
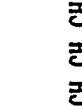
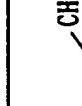
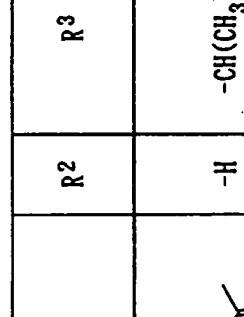
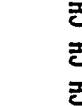
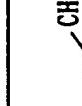
化合物番号	R <sup>1</sup>	R <sup>2</sup>	R <sup>3</sup>	R <sup>4</sup>	R <sup>5</sup>	R <sup>6</sup>	R <sup>7</sup>	
1307		-H	-CH(CH <sub>3</sub> ) <sub>2</sub>	-H		-H		
1308		-H	-CH <sub>2</sub> CH <sub>2</sub> CH <sub>2</sub> CH <sub>3</sub>	-H		-H		
1309		-H	-CH(CH <sub>3</sub> )CH <sub>2</sub> CH <sub>3</sub>	-H		-H		
1310		-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H		-H		

表 - 4 (つづき)

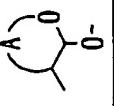
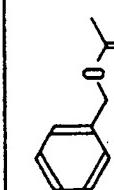
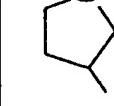
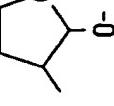
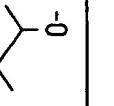
化合物 番号	R <sup>1</sup>	R <sup>2</sup>	R <sup>3</sup>	R <sup>4</sup>	R <sup>5</sup>	R <sup>6</sup>	R <sup>7</sup>	
1311		-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H		-H		
1312		-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H		-H		
1313		-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H		-H		
1314		-H	-CH <sub>2</sub> CH <sub>2</sub> SCH <sub>3</sub>	-H		-H		

表 - 4 (つづき)

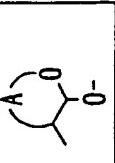
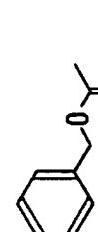
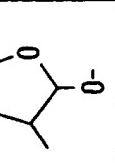
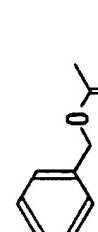
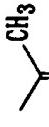
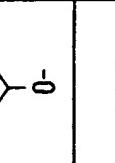
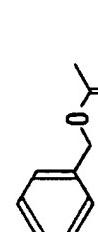
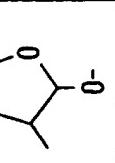
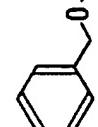
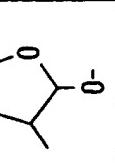
化合物 番号	R <sup>1</sup>	R <sup>2</sup>	R <sup>3</sup>	R <sup>4</sup>	R <sup>5</sup>	R <sup>6</sup>	R <sup>7</sup>	
1315		-H	-CH <sub>2</sub> OH	-H		-H		
1316		-H		-H		-H		
1317		-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H		-H		
1318		-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H		-H		

表 - 4 (つづき)

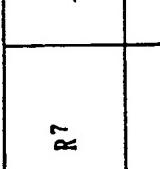
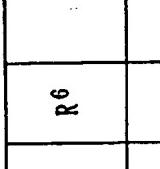
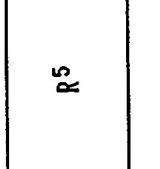
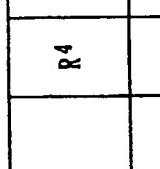
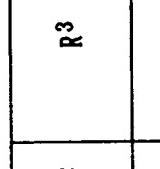
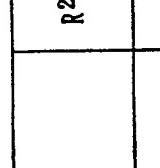
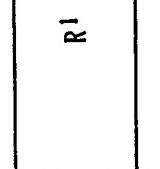
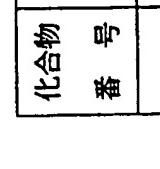
化合物番号	R <sup>1</sup>	R <sup>2</sup>	R <sup>3</sup>	R <sup>4</sup>	R <sup>5</sup>	R <sup>6</sup>	R <sup>7</sup>	
1319		-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H	-CH <sub>2</sub> OH	-H		
1320		-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H	-CH <sub>2</sub> OH	-H		
1321		-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H	-H			
1322		-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H	-H			

表 - 4 (つづき)

化合物番号	R <sup>1</sup>	R <sup>2</sup>	R <sup>3</sup>	R <sup>4</sup>	R <sup>5</sup>	R <sup>6</sup>	R <sup>7</sup>	(A)
1323		-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H	-H	-H		
1324		-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H	-CH <sub>3</sub>	-H		
1325		-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H	-CH <sub>2</sub> CH <sub>2</sub> CH <sub>3</sub>	-H		
1326		-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H	-CH(CH <sub>3</sub> ) <sub>2</sub>	-H		

表 - 4 (つづき)

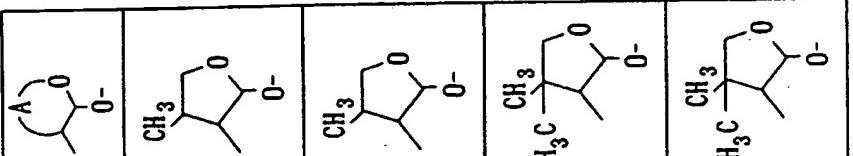
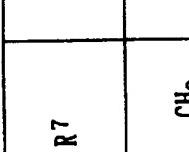
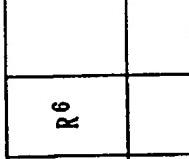
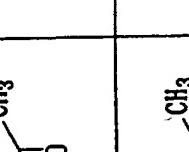
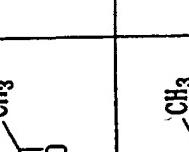
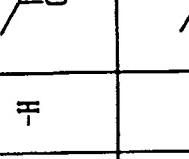
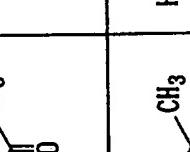
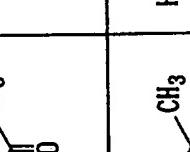
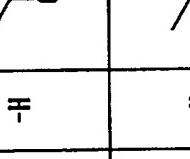
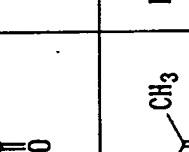
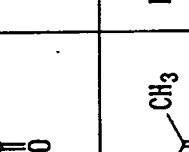
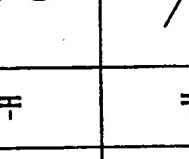
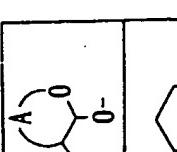
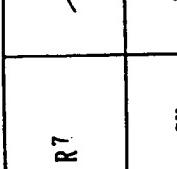
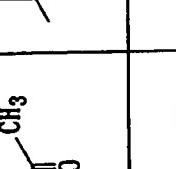
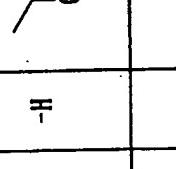
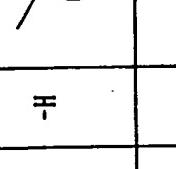
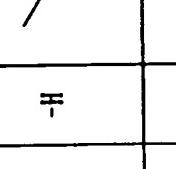
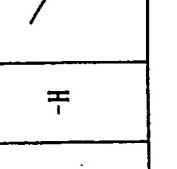
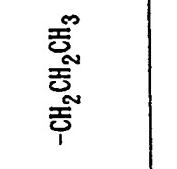
化合物 番号	R <sup>1</sup>	R <sup>2</sup>	R <sup>3</sup>	R <sup>4</sup>	R <sup>5</sup>	R <sup>6</sup>	R <sup>7</sup>	
1327		-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H	-CH <sub>2</sub> CH <sub>2</sub> CH <sub>2</sub> CH <sub>3</sub>	-H		
1328		-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H		
1329		-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H		
1330				-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H		

表 - 4 (つづき)

化合物番号	R <sup>1</sup>	R <sup>2</sup>	R <sup>3</sup>	R <sup>4</sup>	R <sup>5</sup>	R <sup>6</sup>	R <sup>7</sup>	(A)
1331		-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H		-H		
1332		-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H		-H		
1333		-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H		-H		
1334		-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H		-H		

3 0 0

表 - 4 (つづき)

化合物 番号	R <sup>1</sup>	R <sup>2</sup>	R <sup>3</sup>	R <sup>4</sup>	R <sup>5</sup>	R <sup>6</sup>	R <sup>7</sup>	
1335		-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>		-H	-H	-CH <sub>3</sub>	
1336		-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>		-H	-CH <sub>3</sub>	-H	
1337		-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>		-H	-CH <sub>2</sub> CH <sub>3</sub>	-H	
1338		-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>		-H	-CH <sub>2</sub> CH <sub>2</sub> CH <sub>3</sub>	-H	

3 0 1

表 - 4 (つづき)

化合物 番号	R <sup>1</sup>	R <sup>2</sup>	R <sup>3</sup>	R <sup>4</sup>	R <sup>5</sup>	R <sup>6</sup>	R <sup>7</sup>
1339		-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H	-CH(CH <sub>3</sub> ) <sub>2</sub>	-H	
1340		-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H	-CH <sub>2</sub> CH <sub>2</sub> CH <sub>2</sub> CH <sub>3</sub>	-H	
1341		-H	-H	-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H	
1342		-H	-CH <sub>3</sub>	-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H	

表 - 4 (つづき)

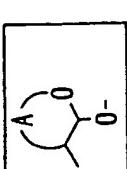
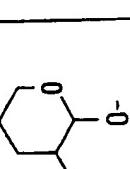
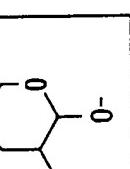
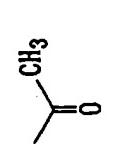
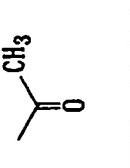
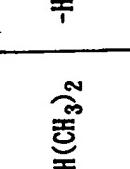
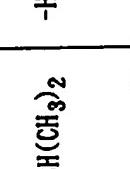
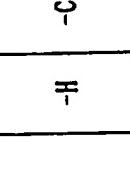
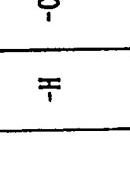
化合物番号	R <sup>1</sup>	R <sup>2</sup>	R <sup>3</sup>	R <sup>4</sup>	R <sup>5</sup>	R <sup>6</sup>	R <sup>7</sup>	
1343		-H	-CH <sub>2</sub> CH <sub>3</sub>	-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H		
1344		-H	-CH <sub>2</sub> CH <sub>2</sub> CH <sub>3</sub>	-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H		
1345		-H	-CH(CH <sub>3</sub> ) <sub>2</sub>	-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H		
1346		-H	-CH <sub>2</sub> CH <sub>2</sub> CH <sub>2</sub> CH <sub>3</sub>	-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H		

表 - 4 (つづき)

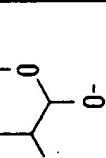
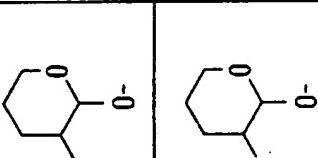
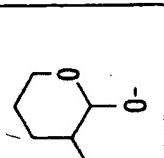
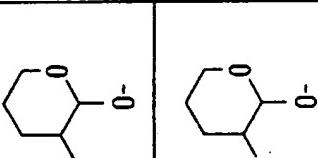
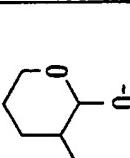
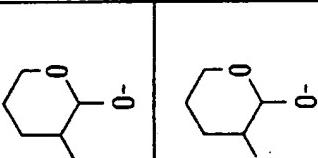
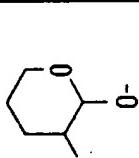
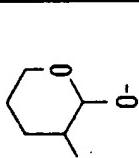
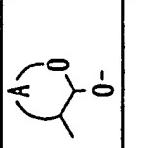
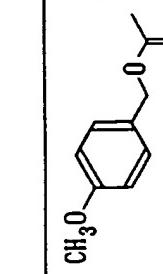
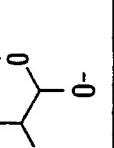
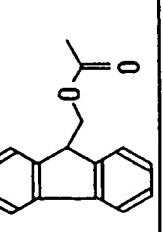
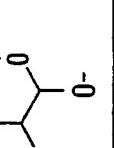
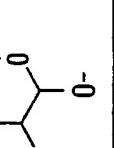
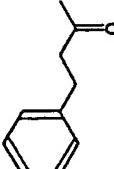
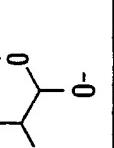
化合物番号	R <sup>1</sup>	R <sup>2</sup>	R <sup>3</sup>	R <sup>4</sup>	R <sup>5</sup>	R <sup>6</sup>	R <sup>7</sup>	
1347	-H	-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H	-CH <sub>3</sub> C=O	
1348		-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H	-CH <sub>3</sub> C=O	
1349		-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H	-CH <sub>3</sub> C=O	
1350		-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H	-CH <sub>3</sub> C=O	

表 - 4 (つづき)

化合物 番号	R <sup>1</sup>	R <sup>2</sup>	R <sup>3</sup>	R <sup>4</sup>	R <sup>5</sup>	R <sup>6</sup>	R <sup>7</sup>	
1351		-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H		
1352		-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H		
1353		-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H		
1354		-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H		

3 0 5

表 - 4 (つづき)

化合物番号	R <sup>1</sup>	R <sup>2</sup>	R <sup>3</sup>	R <sup>4</sup>	R <sup>5</sup>	R <sup>6</sup>	R <sup>7</sup>	(A)
1355		-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H		
1356		-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H		
1357		-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H		
1358		-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H		

表 - 4 (つづき)

化合物番号	R <sup>1</sup>	R <sup>2</sup>	R <sup>3</sup>	R <sup>4</sup>	R <sup>5</sup>	R <sup>6</sup>	R <sup>7</sup>	
1359		-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H		
1360		-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H		
1361		-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H		
1362		-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H		

表 - 4 (つづき)

化合物 番号	R <sup>1</sup>	R <sup>2</sup>	R <sup>3</sup>	R <sup>4</sup>	R <sup>5</sup>	R <sup>6</sup>	R <sup>7</sup>
1363		-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H	
1364		-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H	
1365		-H	-CH <sub>2</sub>	-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H	
1366		-H	-CH <sub>2</sub> CH <sub>2</sub> SCH <sub>3</sub>	-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H	

表 - 4 (つづき)

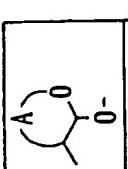
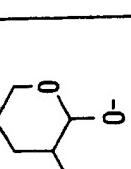
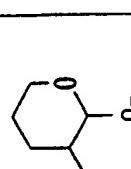
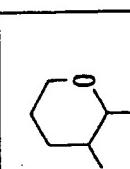
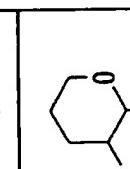
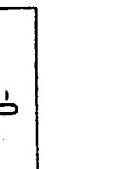
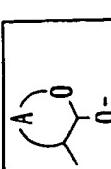
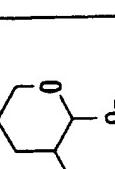
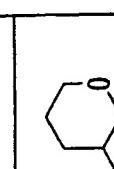
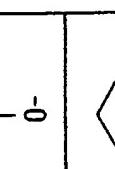
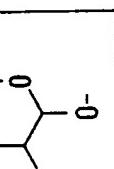
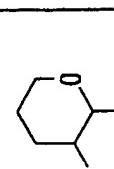
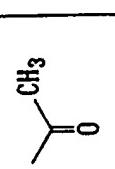
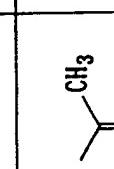
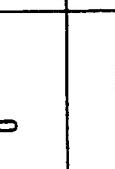
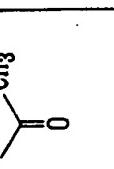
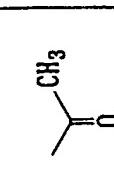
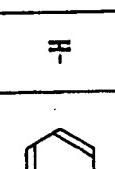
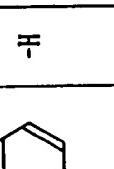
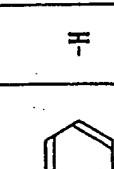
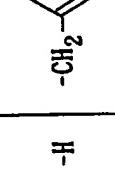
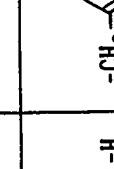
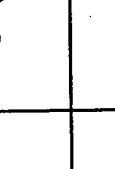
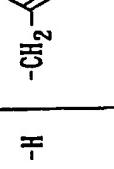
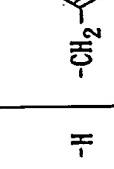
化合物番号	R <sup>1</sup>	R <sup>2</sup>	R <sup>3</sup>	R <sup>4</sup>	R <sup>5</sup>	R <sup>6</sup>	R <sup>7</sup>	
1367		-H	-CH <sub>2</sub> OC(CH <sub>3</sub> ) <sub>3</sub>		-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H	
1368		-H	-CH <sub>2</sub> OH		-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H	
1369		-H			-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H	
1370					-H	-H	-H	

表 - 4 (つづき)

化合物番号	R <sup>1</sup>	R <sup>2</sup>	R <sup>3</sup>	R <sup>4</sup>	R <sup>5</sup>	R <sup>6</sup>	R <sup>7</sup>
1371		-H	-CH <sub>3</sub>	-H		-H	
1372		-H	-CH <sub>2</sub> CH <sub>2</sub> CH <sub>3</sub>	-H		-H	
1373		-H	-CH(CH <sub>3</sub> ) <sub>2</sub>	-H		-H	
1374		-H	-CH <sub>2</sub> CH <sub>2</sub> CH <sub>2</sub> CH <sub>3</sub>	-H		-H	

3 1 0

表 - 4 (つづき)

化合物番号	R <sup>1</sup>	R <sup>2</sup>	R <sup>3</sup>	R <sup>4</sup>	R <sup>5</sup>	R <sup>6</sup>	R <sup>7</sup>	
1375		-H		-H		-H		
1376		-H		-H		-H		
1377		-H		-H		-H		
1378		-H		-H		-H		

3 1 1

表 - 4 (つづき)

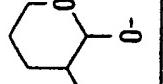
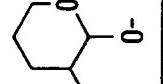
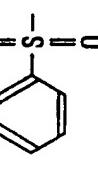
化合物 番号	R <sup>1</sup>	R <sup>2</sup>	R <sup>3</sup>	R <sup>4</sup>	R <sup>5</sup>	R <sup>6</sup>	R <sup>7</sup>	(A)O -O-
1379		-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H	-CH <sub>2</sub> -	-H		
1380				-H	-CH <sub>2</sub> CH <sub>2</sub> SCH <sub>3</sub>	-H		
1381					-H	-CH <sub>2</sub> OH	-H	
1382							-H	

3 1 2

表 - 4 (つづき)

化合物番号	R <sup>1</sup>	R <sup>2</sup>	R <sup>3</sup>	R <sup>4</sup>	R <sup>5</sup>	R <sup>6</sup>	R <sup>7</sup>	(A)
1383		-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H	-CH <sub>2</sub> CH <sub>2</sub> SCH <sub>3</sub>	-H		
1384		-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H	-CH <sub>2</sub> CH <sub>2</sub> SCH <sub>3</sub>	-H		
1385		-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H		-CH <sub>2</sub> OH		
1386		-H	-CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	-H		-CH <sub>2</sub> OH		

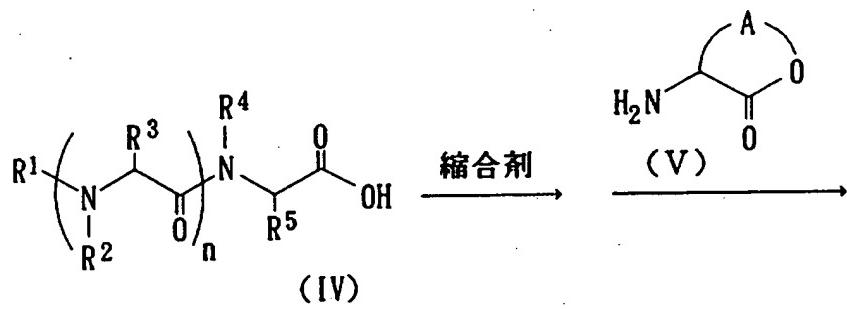
表 - 4 (つづき)

化合物 番号	R <sup>1</sup>	R <sup>2</sup>	R <sup>3</sup>	R <sup>4</sup>	R <sup>5</sup>	R <sup>6</sup>	R <sup>7</sup>	
								
1387		-H		-H		-H		
1388		-H		-H		-H		

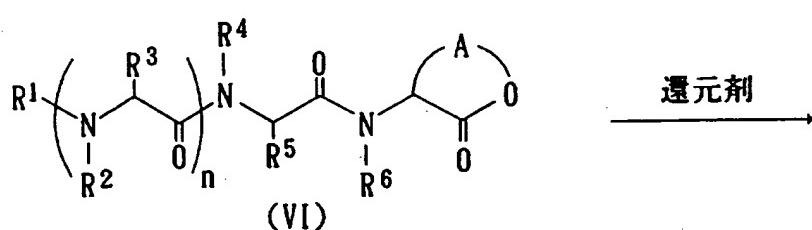
次に本発明の化合物の製造法について説明する。上記一般式(I)で表される含酸素複素環誘導体は、例えば次のような方法で製造することができる。

製造法1：R<sup>7</sup>が水素原子である化合物の製造法

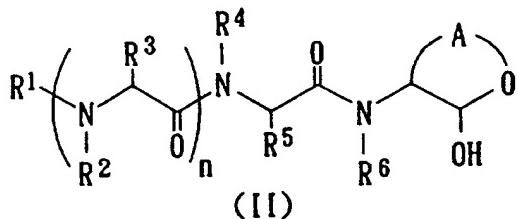
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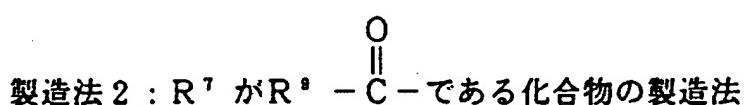
(上記一般式において、R<sup>1</sup>、R<sup>2</sup>、R<sup>3</sup>、R<sup>4</sup>、R<sup>5</sup>、R<sup>6</sup>、Aおよびnは既に定義した通りである)

25

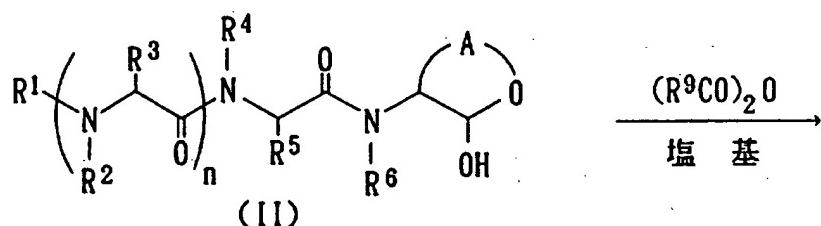
上記一般式(IV)で表されるアミノ酸誘導体を、必要に応じてトリエチルアミン、ピリジン等の塩基の存在下、ジシクロヘキシリカルボジイミド、ジフェニルホスホリルアジド、カルボニルジイミダゾール、オキサリルクロリド、クロル蟻酸イソブチル、塩化チオニル等の縮合剤と反応させてカルボン酸を活性化させ、次に上記一般式(V)で表されるラクトン誘導体を反応させると、上記一般式(VI)で表される化合物が得られる。この縮

合反応に用いる溶媒は、各縮合剤に適した溶媒を適宜選んで使用すればよく、また反応条件等も各縮合剤に適した条件で行えばよい。次に得られた化合物(VI)を水素化ジイソブチルアルミニウム、水素化ホウ素ナトリウム／塩化セリウム等の還元剤で処理すると上記一般式(II)で表される含酸素複素環誘導体を得ることができる。

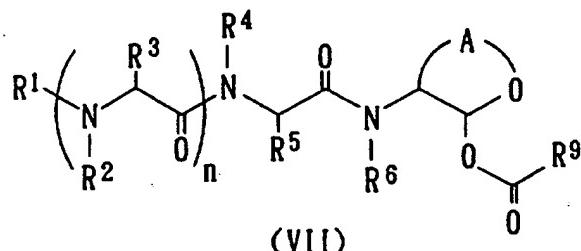
5



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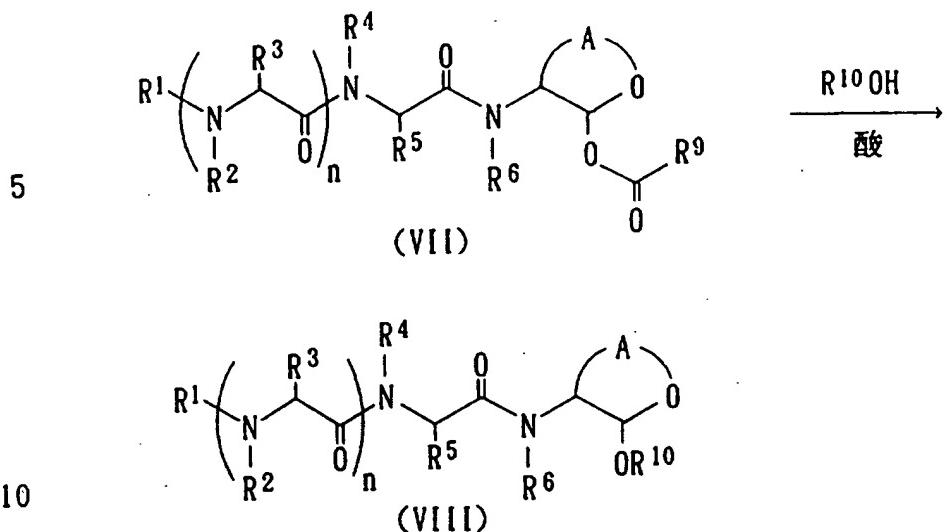
(上記一般式において、R<sup>1</sup>、R<sup>2</sup>、R<sup>3</sup>、R<sup>4</sup>、R<sup>5</sup>、R<sup>6</sup>、R<sup>8</sup>、A および n は既に定義した通りである)

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製造法1により製造した含酸素複素環誘導体を、塩化メチレン、1,2-ジクロロエタン、ジメチルホルムアミド、N-メチルピロリドン、テトラヒドロフラン、酢酸エチル、アセトニトリル、トルエン等の有機溶媒に溶解し、ピリジン、トリエチルアミン、4-ジメチルアミノピリジン等の塩基の存在下、上記一般式(R<sup>8</sup>CO)<sub>2</sub>Oで表される酸無水物を反応させると、上記式(VII)で表される含酸素複素環誘導体を得ることができる。この反応は、無溶媒で行うこともできる。

25

製造法3:  $R^1$  が  $C_1 \sim C_5$  のアルキル基である化合物の製造法



(上記一般式において、 $R^1$ 、 $R^2$ 、 $R^3$ 、 $R^4$ 、 $R^5$ 、 $R^6$ 、 $R^9$ 、A および n は既に定義した通りであり、 $R^{10}$  は  $C_1 \sim C_5$  のアルキル基を表す)

15 製造法 2 で得られた化合物 (VII)を、 $R^{10}OH$ で表されるアルコールに溶解し、塩酸、硫酸等の酸を触媒量加えて攪拌すると、上記一般式 (VIII) ) で表される化合物が得られる。

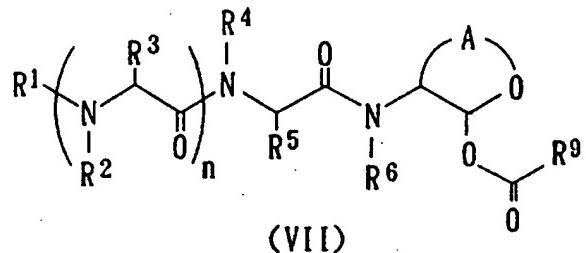
上記の一連の操作において、官能基の保護、脱保護が必要になる場合もあるが、その際の保護基はその官能基に適したものを選択し、実験操作も文献公知の方法を用いて行えばよい。

かくして得られた本発明の含酸素複素環誘導体のうち、R<sup>7</sup> が水素原子の化合物 (II) は、システインプロテアーゼに対して強い阻害活性を示す。

また、R<sup>7</sup> が C<sub>1</sub> ~ C<sub>5</sub> のアルキル基の化合物 (VIII) および R<sup>9</sup> - C = O (R<sup>9</sup> は C<sub>1</sub> ~ C<sub>10</sub> のアルキル基または置換基を有していてもよい C<sub>6</sub> ~ C<sub>12</sub> のアリール基を表す) の化合物 (VII) は、システインプロテアーゼに

対して強い阻害活性を示す含酸素複素環誘導体 (II) のプロドラッグとして用いることができる。すなわち、化合物 (VII) または (VIII) を経口投与すると、腸管等から吸収された後、生体内の酵素などの働きによりすみやかに活性本体である含酸素複素環誘導体 (II) が遊離されてくる。

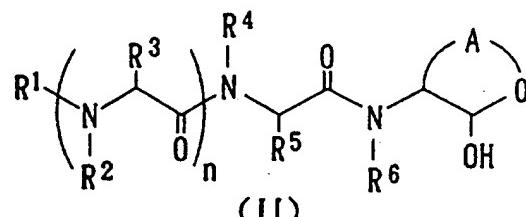
5



(VII)

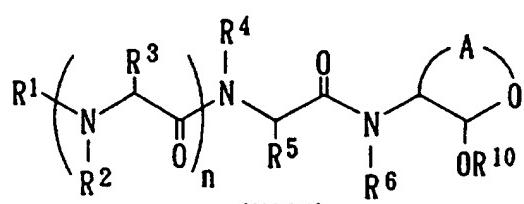
10

生体内



(II)

15



(VIII)

20

かかる本発明化合物を臨床に応用するに際し、治療上有効な成分の担体成分に対する割合は、1重量%から90重量%の間で変動されうる。例えば、本発明の化合物は顆粒剤、細粒剤、散剤、硬カプセル剤、軟カプセル剤、シロップ剤、乳剤、懸濁剤または液剤等の剤形にして経口投与してもよいし、注射剤として静脈内投与、筋肉内投与または皮下投与してもよい。また、座剤として用いることもできる。また、注射用の粉末にして用事調製して使用してもよい。経口、経腸、非経口に適した医薬用の有機または無機の、固体または液体の担体もしくは希釈剤を本発明薬剤を調製するために用いることができる。固体製剤を製造する際に用いられる賦形剤としては、例えば乳糖、蔗糖、デンブン、タルク、セルロース、デキストリン、カオリン、炭酸カルシウム等が用いられる。経口投与のための液体製剤、

すなわち乳剤、シロップ剤、懸濁剤、液剤等は、一般的に用いられる不活性な希釈剤、例えば水または植物油等を含む。この製剤は、不活性な希釈剤以外に補助剤、例えば潤滑剤、懸濁補助剤、甘味剤、芳香剤、着色剤または保存剤等を含むことができる。液体製剤にしてゼラチンのような吸收されうる物質のカプセル中に含まれてもよい。非経口投与の製剤、すなわち注射剤、座剤等の製造に用いられる溶剤または懸濁剤としては、例えば水、プロピレングリコール、ポリエチレングリコール、ベンジルアルコール、オレイン酸エチル、レシチン等が挙げられる。座剤に用いられる基剤としては、例えばカカオ脂、乳化カカオ脂、ラウリン脂、ウィテップゾール等が挙げられる。製剤の調製方法は常法によればよい。

臨床投与量は、経口投与により用いられる場合には、成人に対し本発明の化合物として、一般には一日量0.01～1000mgであるが、年令、病態、症状により適宜増減することがさらに好ましい。前記一日量の本発明薬剤は、一日に一回、または適当な間隔をおいて一日に2もしくは3回に分けて投与してもよいし、間欠投与してもよい。

また、注射剤として用いる場合には、成人に対し本発明の化合物として、一日量0.001～100mgを連続投与又は間欠投与することが望ましい。

#### 図面の簡単な説明

第1図は、実施例88の化合物をラットの血清に5分間インキュベートした後のHPLCチャートであり、第2図は、血清がない場合の、実施例1の化合物と実施例88の化合物を混合して溶解したサンプルのHPLCチャートである。

#### 発明を実施するための最良の形態

以下、参考例および実施例により本発明をさらに詳しく説明するが、本発明はその要旨を越えない限り、これらの参考例および実施例に何ら制限

を受けるものではない。

参考例1 (S)-3-((S)-4-メチル-2-フェニルスルホニルアミノバレリルアミノ)-2-テトラヒドロフラノンの製造

塩化チオニル 6 m l を -5 °C に冷却し、この反応液に N-フェニルスルホニル-L-ロイシン 998 mg を加え -5 °C で 10 分間攪拌した後、室温に戻しさらに 3 時間攪拌した。つぎに反応液を減圧下濃縮し、得られた残渣にトルエン 10 m l を加え濃縮し残渣として粗な N-フェニルスルホニル-L-ロイシル=クロリドを得た。得られた粗な N-フェニルスルホニル-L-ロイシル=クロリドを塩化メチレン 20 m l に溶かし、氷冷下 L-ホモセリンラクトン塩酸塩 443 mg およびトリエチルアミン 0.9 46 m l を加えた。反応液を氷冷下 15 分間攪拌した後さらに室温で 1.5 時間攪拌した。反応終了後反応液に希塩酸を加え、塩化メチレンで抽出した。抽出液を水、飽和重曹水、飽和食塩水で順次洗浄した後、硫酸マグネシウムで乾燥してからこれを濾過した。濾液を濃縮し、得られた残渣に酢酸エチル 10 m l およびヘキサン 20 m l を加え攪拌し生成した結晶を濾取し目的物 861 mg を得た。

収率 : 76 %

融点 : 183 - 184 °C

IR (KBr, cm<sup>-1</sup>) : 3331, 3256, 1772, 1649.

NMR (CDCl<sub>3</sub>, δ) : 0.67 (d, J = 6.0 Hz, 3H), 0.84 (d, J = 6.3 Hz, 3H), 1.45 - 1.56 (m, 3H), 2.01 (m, 1H), 2.63 (m, 1H), 4.26 (m, 1H), 4.36 (m, 1H), 4.45 (ddd, J = 9.3 Hz, 9.3 Hz, 1.8 Hz, 1H), 5.28 (d, J = 8.1 Hz, 1H), 6.67 (d, J = 6.0 Hz, 1H), 7.52 (m, 2H), 7.60 (m, 1H), 7.88 (dd, J = 7.2 Hz, 1.5 Hz, 2H).

実施例1 (3S)-3-((S)-4-メチル-2-フェニルスルホニルアミノバレリルアミノ)-2-テトラヒドロフラノール(表-1の化合物番号196)の製造

参考例1で得られた(S)-3-((S)-2-フェニルスルホニルアミノ-4-メチルバレリルアミノ)-2-テトラヒドロフラノン413mgを塩化メチレン60mlに溶解し、-78°Cに冷却した。つぎに反応液に1.01mol/lの水素化ジイソブチルアルミニウムのトルエン溶液3.81mlを加えた。3時間後反応液に飽和塩化アンモニウム水溶液および酢酸エチルを加え、室温に戻した後セライトで濾過し、セライトを酢酸エチルでよく洗浄した。濾液を飽和食塩水で洗浄後硫酸マグネシウムで乾燥してからこれを濾過した。濾液を濃縮し、得られた残渣をシリカゲルカラムクロマトグラフィー(展開溶媒30%ヘキサン含有酢酸エチル)で精製し、目的物191mgを得た。

収率: 46%

融点: 162°C

IR (KBr, cm<sup>-1</sup>): 3337, 3260, 1649

NMR (CDCl<sub>3</sub>+DMSO-d<sub>6</sub>, δ): 0.72 (d, J=6.6Hz, 2.7H), 0.78 (d, J=6.3Hz, 0.3H), 0.84 (d, J=6.6Hz, 2.7H), 0.86 (d, J=6.3Hz, 0.3H), 1.46 (t, J=7.2Hz, 2H), 1.63 (m, 2H), 2.09 (m, 0.9H), 2.25 (m, 0.1H), 3.68-3.81 (m, 2H), 3.99-4.12 (m, 2H), 4.95 (br s, 0.1H), 5.03 (d, J=3.6Hz, 0.1H), 5.15 (dd, J=3.9Hz, 3.9Hz, 0.9H), 5.63 (d, J=3.9H, 0.9H), 6.68 (d, J=9.3Hz, 0.1H), 6.81 (d, J=8.1Hz, 0.9H), 6.89 (d, J=

7. 8 Hz, 0. 9 H), 7. 14 (d, J = 7. 2 Hz, 0. 1 H),  
7. 46 - 7. 58 (m, 3 H), 7. 85 (m, 2 H). この溶媒での  
異性体比は約 9 : 1 である。

NMR (CD<sub>3</sub>OD, δ) : 0. 74 (d, J = 6. 5 Hz, 3 H),  
5 0. 80 (d, J = 6. 5 Hz, 3 H), 0. 86 (d, J = 7. 1 Hz  
, 3 H), 0. 88 (d, J = 6. 8 Hz, 3 H), 1. 34 - 1. 50  
(m, 3 H), 1. 64 (m, 1 H), 2. 01 (m, 0. 4 H), 2.  
17 (m, 0. 6 H), 3. 73 - 3. 97 (m, 4 H), 4. 96 (s  
, 0. 6 H), 5. 11 (d, J = 4 Hz, 0. 4 H), 7. 53 - 7.  
10 6. 1 (m, 3 H), 7. 85 (m, 2 H). この溶媒での異性体比は約 6  
: 4 である。

参考例 1 および実施例 1 と同様の方法により、以下実施例 2 から実施例  
8 7 の化合物を製造した。以下、その物性値を記す。

実施例 2 (3 S) - 3 - ベンジロキシカルボニルアミノアセチルアミノ  
15 - 2 - テトラヒドロフラノール (表-1 の化合物番号 17) の製造

融点 : 119 - 121 °C

IR (KBr, cm<sup>-1</sup>) : 3314, 1692, 1649, 1541.  
NMR (CDCl<sub>3</sub>, δ) : 1. 84 (m, 1 H), 2. 22 - 2. 5  
0 (m, 1 H), 2. 86 (s, 0. 3 H), 2. 97 (s, 0. 7 H)  
20 , 3. 79 - 4. 00 (m, 3 H), 4. 11 (m, 1 H), 4. 37 (m,  
1 H), 5. 14 (s, 2 H), 5. 27 (m, 1. 3 H), 5. 39 (s,  
0. 7 H), 6. 12 (s, 0. 3 H), 6. 42 (s, 0. 7 H), 7. 36 (m, 5 H).

実施例 3 (3 S) - 3 - ((S) - 2 - ベンジロキシカルボニルアミノ  
25 プロピオニルアミノ) - 2 - テトラヒドロフラノール (表-1 の化合物番  
号 18) の製造

融点：161 - 163°C

IR (KBr, cm<sup>-1</sup>) : 3312, 1688, 1647, 1561,  
1530.

NMR (CDCl<sub>3</sub>, δ) : 1. 36 (d, J=7. 2Hz, 0. 75  
5 H), 1. 39 (d, 7. 2Hz, 2. 25H), 1. 81 (m, 1H)  
, 2. 34 (m, 0. 75H), 2. 43 (m, 0. 25H), 2. 99  
(s, 0. 25H), 3. 09 (s, 0. 75H), 3. 87 (ddd,  
J=7. 8Hz, 7. 8Hz, 7. 8Hz, 0. 75H), 4. 00 (m  
, 0. 25H), 4. 11 (m, 1H), 4. 22 (m, 1H), 4. 3  
10 7 (m, 1H), 5. 11 (s, 2H), 5. 29 (m, 2H), 6. 2  
8 (s, 0. 25H), 6. 45 (s, 0. 75H), 7. 35 (m, 5  
H).

実施例4 (3S)-3-((S)-2-ベンジロキシカルボニルアミノ  
バレリルアミノ)-2-テトラヒドロフラノール(表-1の化合物番号2  
15 0)の製造

融点：148 - 149°C

IR (KBr, cm<sup>-1</sup>) : 3299, 1694, 1645, 1539.  
NMR (CDCl<sub>3</sub>, δ) : 0. 92 (m, 3H), 1. 38 (m, 2  
H), 1. 62 (m, 1H), 1. 78 (m, 2H), 2. 31 (m, 0  
20 . 7H), 2. 42 (m, 0. 3H), 3. 27 (s, 0. 3H), 3.  
42 (s, 0. 7H), 3. 86 (ddd, J=7. 8Hz, 7. 8Hz  
, 7. 8Hz, 0. 7H), 3. 98 (m, 0. 3H), 4. 11 (m,  
2H), 4. 33 (m, 1H), 5. 10 (s, 2H), 5. 27 (m,  
1. 3H), 5. 38 (d, J=7. 1Hz, 0. 7H), 6. 30 (s  
25 , 0. 3H), 6. 46 (d, J=8. 0Hz, 0. 7H), 7. 35 (m, 5H).

実施例 5 3 - ((S) - 2 - ベンジロキシカルボニルアミノ - 3 - メチルブチリルアミノ) - 2 - テトラヒドロフラノール (表 - 1 の化合物番号 21) の製造

融点 : 122 - 123°C

5 IR (KBr, cm<sup>-1</sup>) : 3302, 1694, 1647, 1537.  
 NMR (CDCl<sub>3</sub>, δ) : 0. 94 (m, 6H), 1. 83 (m, 1H), 2. 12 (m, 1H), 2. 30 (m, 0. 6H), 2. 44 (m, 0. 4H), 3. 40 (s, 0. 4H), 3. 49 (s, 0. 6H), 3. 82 - 4. 06 (m, 2H), 4. 10 (m, 1H), 4. 38 (m, 1H), 5. 09 (m, 2H), 5. 26 (s, 0. 4H), 5. 32 (s, 0. 6H), 5. 50 (m, 1H), 6. 32 (s, 0. 2H), 6. 45 (s, 0. 4H), 6. 54 (s, 0. 2H), 6. 68 (s, 0. 2H), 7. 34 (m, 5H).

実施例 6 (3S) - 3 - ((S) - 2 - ベンジロキシカルボニルアミノヘキサノイルアミノ) - 2 - テトラヒドロフラノール (表 - 1 の化合物番号 22) の製造

融点 : 165 - 166°C

IR (KBr, cm<sup>-1</sup>) : 3304, 1694, 1645, 1539.  
 NMR (CDCl<sub>3</sub>, δ) : 0. 87 (m, 3H), 1. 32 (m, 3H), 1. 64 (m, 2H), 1. 78 (m, 2H), 2. 29 (m, 0. 8H), 2. 42 (m, 0. 2H), 3. 22 (s, 0. 2H), 3. 39 (s, 0. 8H), 3. 86 (ddd, J = 7. 8 Hz, 7. 8 Hz, 7. 8 Hz, 0. 8H), 3. 99 (m, 0. 2H), 4. 11 (m, 2H), 4. 33 (m, 1H), 5. 10 (s, 2H), 5. 17 - 5. 44 (m, 2H), 6. 27 (s, 0. 2H), 6. 47 (d, J = 7. 8 Hz, 0. 8H), 7. 34 (m, 5H).

実施例7 (3S)-3-((2S)-2-ベンジロキシカルボニルアミノ-3-メチルバレリルアミノ)-2-テトラヒドロフラノール(表-1の化合物番号23)の製造

融点: 169-171°C

5 IR (KBr, cm<sup>-1</sup>) : 3299, 1694, 1649, 1539.  
NMR (CDCl<sub>3</sub>, δ) : 0.91 (m, 6H), 1.12 (m, 1H), 1.50 (m, 1H), 1.84 (m, 2H), 2.31 (m, 0.7H), 2.44 (m, 0.3H), 3.40 (s, 1H), 3.82-4.16 (m, 3H), 4.35 (m, 1H), 5.10 (s, 2H)  
10 5.26 (m, 1H), 5.41 (s, 1H), 6.17 (s, 0.3H), 6.40 (s, 0.7H), 7.38 (m, 5H).

実施例8 (3S)-3-((S)-2-アミノ-4-メチルバレリルアミノ)-2-テトラヒドロフラノール塩酸塩(表-1の化合物番号24)の製造

15 NMR (CD<sub>3</sub>OD, δ) : 1.00 (d, J=5.6Hz, 6H), 1.69-1.83 (m, 3H), 1.98 (m, 1H), 2.24 (m, 0.5H), 2.34 (m, 0.5H), 3.84-4.07 (m, 4H), 4.95 (s, 0.5H), 4.99 (d, J=4.0Hz, 0.5H).

20 実施例9 3-((S)-2-メトキシカルボニルアミノ-4-メチルバレリルアミノ)-2-テトラヒドロフラノール(表-1の化合物番号25)の製造

融点: 139-141°C

25 IR (KBr, cm<sup>-1</sup>) : 3287, 3081, 1686, 1653, 1553.  
NMR (CDCl<sub>3</sub>, δ) : 0.94 (m, 6H), 1.50-1.7

4 (m, 3 H), 1. 81 (m, 1 H), 2. 36 (m, 0. 6 H), 2  
 . 48 (m, 0. 4 H), 3. 44 (s, 0. 4 H), 3. 58 (s, 0  
 . 6 H), 3. 68 (s, 3 H), 3. 99 (m, 0. 6 H), 4. 01  
 (m, 0. 4 H), 4. 13 (m, 2 H), 4. 34 (m, 1 H), 5.  
 5 27 (d, J = 3. 0 Hz, 0. 6 H), 5. 34 (m, 1. 4 H), 6  
 . 49 (s, 0. 4 H), 6. 57 (d, J = 7. 8 Hz, 0. 4 H),  
 6. 68 (s, 0. 2 H).

実施例 10 (3 S) - 3 - ((S) - 2 - t e r t - プトキシカルボニ  
 ルアミノ - 4 - メチルバレリルアミノ) - 2 - テトラヒドロフラノール (表 - 1 の化合物番号 27) の製造

融点 : 65 - 70 °C

IR (KBr, cm<sup>-1</sup>) : 3310, 1698, 1657.  
 NMR (CDCl<sub>3</sub>, δ) : 0. 95 (m, 6 H), 1. 44 (s, 4  
 . 5 H), 1. 44 (s, 4. 5 H), 1. 48 (m, 1 H), 1. 66  
 15 (m, 2 H), 1. 81 (m, 1 H), 2. 33 (m, 0. 5 H), 2.  
 46 (m, 0. 5 H), 3. 88 (ddd, J = 7. 5 Hz, 7. 5 Hz  
 , 7. 5 Hz, 0. 5 H), 4. 01 (ddd, J = 8. 4 Hz, 8. 4  
 Hz, 8. 4 Hz, 0. 5 H), 4. 12 (m, 2 H), 4. 36 (m,  
 1 H), 4. 96 (d, J = 7. 8 Hz, 0. 5 H), 5. 03 (m, 0  
 20 . 5 H), 5. 26 (s, 0. 5 H), 5. 33 (s, 0. 5 H), 6.  
 47 (m, 0. 5 H), 6. 61 (m, 0. 5 H).

実施例 11 (3 S) - 3 - ((S) - 2 - イソプトキシカルボニルアミ  
 ノ - 4 - メチルバレリルアミノ) - 2 - テトラヒドロフラノール (表 - 1  
 の化合物番号 28) の製造

25 融点 : 31 - 33 °C

IR (KBr, cm<sup>-1</sup>) : 3310, 1699, 1657, 1543.

NMR (CDCl<sub>3</sub>, δ) : 0. 94 (m, 12H), 1. 47 - 2. 00 (m, 5H), 2. 36 (m, 0. 5H), 2. 45 (m, 0. 5H), 2. 96 (s, 0. 5H), 3. 17 (s, 0. 5H), 3. 90 (m, 1. 5H), 4. 02 (m, 0. 5H), 4. 15 (m, 2H), 4. 36 (m, 1H), 5. 08 (m, 1H), 5. 27 (s, 0. 5H), 5. 35 (s, 0. 5H), 6. 24 (s, 0. 5H), 6. 50 (s, 0. 5H).

実施例12 (3S)-3-((S)-2-シクロヘキシルメトキシカルボニルアミノ-4-メチルバレリルアミノ)-2-テトラヒドロフラノール(表-1の化合物番号29)の製造

融点: 52 - 54°C  
IR (KBr, cm<sup>-1</sup>) : 3310, 1703, 1659, 1545.  
NMR (CDCl<sub>3</sub>, δ) : 0. 93 (m, 8H), 1. 26 - 1. 33 (m, 4H), 1. 43 - 1. 92 (m, 9H), 2. 36 (m, 0. 5H), 2. 50 (m, 0. 5H), 3. 22 (s, 0. 5H), 3. 49 (s, 0. 5H), 3. 87 - 4. 23 (m, 5H), 4. 34 (m, 1H), 5. 13 (m, 1H), 5. 26 (d, J = 2. 7Hz, 0. 5H), 5. 32 (dd, J = 3. 9Hz, 3. 9Hz, 0. 5H), 5. 34 (s, 0. 5H), 6. 53 (s, 0. 5H).

実施例13 (3S)-3-((S)-2-ベンジロキシカルボニルアミノ-4-メチルバレリルアミノ)-2-テトラヒドロフラノール(表-1の化合物番号31)の製造

融点: 40 - 43°C  
IR (KBr, cm<sup>-1</sup>) : 3306, 1705, 1657.  
NMR (CDCl<sub>3</sub>, δ) : 0. 92 (d, J = 6. 1Hz, 3H), 0. 94 (d, J = 5. 9Hz, 3H), 1. 52 (m, 1H), 1. 6

4 (m, 2 H), 1. 78 (m, 1 H), 2. 29 (m, 0. 5 H), 2  
1. 41 (m, 0. 5 H), 3. 51 (s, 0. 5 H), 3. 74 (s, 0  
1. 5 H), 3. 85 (ddd, J = 8. 0 Hz, 8. 0 Hz, 8. 0 Hz  
1. 0. 5 H), 3. 97 (m, 0. 5 H), 4. 10 (m, 2 H), 4.  
5 3. 32 (m, 1 H), 5. 09 (s, 1 H), 5. 10 (s, 1 H), 5.  
2. 24 (s, 0. 5 H), 5. 29 (s, 0. 5 H), 5. 35 (d, J =  
6. 5 Hz, 0. 5 H), 5. 38 (d, J = 8. 2 Hz, 0. 5 H),  
6. 45 (d, J = 6. 0 Hz, 0. 5 H), 6. 57 (d, J = 6. 0  
Hz, 0. 5 H), 7. 33 (m, 5 H).  
10 実施例 14 (3 S) - 3 - { (S) - 2 - (N-ベンジロキシカルボニ  
ル-N-メチル) アミノ - 4 - メチルバレリルアミノ} - 2 - テトラヒド  
ロフラノール (表-1 の化合物番号 32) の製造

IR (neat) : 3335, 1669.  
NMR (CDCl<sub>3</sub>, δ) : 0. 93 (m, 6 H), 1. 49 (m, 1  
15 H), 1. 69 (m, 3 H), 2. 28 (m, 0. 5 H), 2. 39 (m  
, 0. 5 H), 2. 85 (s, 1. 5 H), 2. 86 (s, 1. 5 H),  
3. 12 (s, 0. 5 H), 3. 30 (s, 0. 5 H), 3. 85 (m,  
1 H), 4. 07 (m, 1 H), 4. 29 (m, 1 H), 4. 60 (m.  
0. 5 H), 4. 70 (m, 0. 5 H), 5. 09 - 5. 26 (m, 3 H  
20 ), 6. 24 (s, 0. 5 H), 6. 53 (s, 0. 5 H), 7. 36 (m,  
5 H).

実施例 15 (3 S) - 3 - { (S) - 2 - (4 - フルオロベンジロキシ  
カルボニルアミノ) - 4 - メチルバレリルアミノ} - 2 - テトラヒドロフ  
ラノール (表-1 の化合物番号 37) の製造

25 融点 : 50 - 52 °C

IR (KBr, cm<sup>-1</sup>) : 3310, 1705, 1657, 1607.

1541, 1514.

NMR (CDCl<sub>3</sub>, δ) : 0.93 (m, 6H), 1.47 - 1.90 (m, 4H), 2.32 (m, 0.5H), 2.44 (m, 0.5H), 3.10 (s, 0.5H), 3.35 (s, 0.5H), 3.87 (d 5 dd, J=7.8Hz, 7.8Hz, 7.8Hz, 0.5H), 3.98 (m, 0.5H), 4.11 (m, 2H), 4.33 (m, 1H), 5.04 (s, 1H), 5.06 (s, 1H), 5.25 (m, 2H), 6.20 (bs, 0.5H), 6.46 (d, J=8.1Hz, 0.5H), 7.03 (dd, J=8.7Hz, 2H), 7.33 (m, 2H).

10 実施例16 (3S)-3-[(S)-2-(2-クロロベンジロキシカルボニルアミノ)-4-メチルバレリルアミノ]-2-テトラヒドロフランノール(表-1の化合物番号38)の製造

融点: 46 - 49°C

IR (KBr, cm<sup>-1</sup>) : 3308, 1707, 1657, 1541.

15 NMR (CDCl<sub>3</sub>, δ) : 0.94 (m, 6H), 1.48 - 1.86 (m, 4H), 2.32 (m, 0.6H), 2.48 (m, 0.4H), 2.90 (s, 0.4H), 3.09 (s, 0.6H), 3.88 (d dd, J=7.8Hz, 7.8Hz, 7.8Hz, 0.6H), 4.01 (m, 0.4H), 4.11 (m, 2H), 4.34 (m, 1H), 5.23 (s, 2H), 5.25 (m, 2H), 6.18 (s, 0.4H), 6.45 (d, J=7.6Hz, 0.6H), 7.26 (m, 2H), 7.40 (m, 2H).

実施例17 (3S)-3-[(S)-2-(4-クロロベンジロキシカルボニルアミノ)-4-メチルバレリルアミノ]-2-テトラヒドロフランノール(表-1の化合物番号40)の製造

融点: 47 - 49°C

IR (KBr, cm<sup>-1</sup>) : 3308, 1705, 1657, 1541.

NMR (CDCl<sub>3</sub>, δ) : 0. 94 (m, 6H), 1. 50 - 1. 86 (m, 4H), 2. 32 (m, 0. 7H), 2. 44 (m, 0. 3H), 2. 88 (s, 0. 3H), 3. 03 (s, 0. 7H), 3. 88 (d 5 dd, J=7. 8Hz, 7. 8Hz, 7. 8Hz, 0. 7H), 3. 95 (m, 0. 3H), 4. 12 (m, 2H), 4. 35 (m, 1H), 5. 06 (s, 0. 6H), 5. 07 (s, 1. 4H), 5. 22 (m, 1. 3H), 5. 30 (s, 0. 7H), 6. 09 (s, 0. 3H), 6. 39 (d, J=8. 7Hz, 0. 7H), 7. 31 (m, 4H).

10 実施例18 (3S)-3-{(S)-4-メチル-2-(2-メチルベンジロキシカルボニルアミノ)バレリルアミノ}-2-テトラヒドロフランノール(表-1の化合物番号44)の製造

融点: 120~122°C

IR (KBr, cm<sup>-1</sup>) : 3302, 1694, 1645, 1541.

15 NMR (CDCl<sub>3</sub>, δ) : 0. 93 (m, 6H), 1. 52 (m, 1H), 1. 59 (m, 3H), 2. 16 - 2. 49 (m, 1H), 2. 34 (s, 3H), 3. 28 (s, 0. 5H), 3. 52 (s, 0. 5H), 3. 86 (dd, J=7. 8Hz, 7. 8Hz, 7. 8Hz, 0. 5H), 3. 98 (m, 0. 5H), 4. 13 (m, 2H), 4. 31 (m, 1H), 5. 12 (s, 2H), 5. 27 (m, 2H), 6. 34 (s, 0. 5H), 6. 51 (s, 0. 5H), 7. 19 (m, 2H), 7. 31 (m, 2H).

20 実施例19 (3S)-3-{(S)-4-メチル-2-(4-メチルベンジロキシカルボニルアミノ)バレリルアミノ}-2-テトラヒドロフランノール(表-1の化合物番号46)の製造

IR (KBr, cm<sup>-1</sup>) : 3310, 1703, 1657, 1539.

- NMR (CDCl<sub>3</sub>, δ) : 0. 93 (m, 6 H), 1. 52 (m, 1 H), 1. 58 - 1. 86 (m, 3 H), 2. 29 (m, 0. 5 H), 2. 35 (s, 3 H), 2. 43 (m, 0. 5 H), 2. 91 (s, 0. 5 H), 3. 03 (s, 0. 5 H), 3. 87 (ddd, J = 7. 8 Hz, 7. 8 Hz, 0. 5 H), 3. 97 (m, 0. 5 H), 4. 10 (m, 2 H), 4. 33 (m, 1 H), 5. 06 (s, 2 H), 5. 14 (m, 1 H), 5. 26 (m, 1 H), 6. 20 (s, 0. 5 H), 6. 44 (s, 0. 5 H), 7. 16 (m, 2 H), 7. 23 (m, 2 H).
- 10 実施例 20 (3 S) - 3 - { (S) - 2 - (2-メトキシベンジロキシカルボニルアミノ) - 4 - メチルバレリルアミノ} - 2 - テトラヒドロフラノール (表-1 の化合物番号 47) の製造  
融点 : 36 - 38 °C  
IR (KBr, cm<sup>-1</sup>) : 3308, 1703, 1657, 1539.
- 15 NMR (CDCl<sub>3</sub>, δ) : 0. 93 (m, 6 H), 1. 51 (m, 1 H), 1. 60 - 1. 91 (m, 3 H), 2. 30 (m, 0. 6 H), 2. 42 (m, 0. 4 H), 3. 15 (s, 0. 4 H), 3. 31 (d, J = 3. 0 Hz, 0. 6 H), 3. 83 (s, 3 H), 3. 87 (m, 0. 6 H), 3. 91 (m, 0. 4 H), 4. 13 (m, 2 H), 4. 32 (m, 1 H), 5. 16 (s, 0. 8 H), 5. 18 (s, 1. 2 H), 5. 23 (m, 2 H), 6. 65 (s, 0. 4 H), 6. 53 (d, J = 7. 5 Hz, 0. 6 H), 6. 91 (m, 2 H), 7. 31 (m, 2 H).
- 20 実施例 21 (3 S) - 3 - { (S) - 2 - (4-メトキシベンジロキシカルボニルアミノ) - 4 - メチルバレリルアミノ} - 2 - テトラヒドロフラノール (表1 の化合物番号 49) の製造  
融点 : 30 - 33 °C

3 3 1

IR (KBr, cm<sup>-1</sup>) : 3310, 1701, 1657, 1516.  
 NMR (CDCl<sub>3</sub>, δ) : 0. 92 (m, 6H), 1. 50 (m, 1H), 1. 59 - 1. 88 (m, 3H), 2. 29 (m, 0. 5H), 2. 42 (m, 0. 5H), 3. 01 (s, 0. 5H), 3. 20 (d, J = 3. 0 Hz, 0. 5H), 3. 80 (s, 3H), 3. 88 (ddd, J = 7. 8 Hz, 7. 8 Hz, 7. 8 Hz, 0. 5H), 3. 96 (m, 0. 5H), 4. 11 (m, 2H), 4. 33 (m, 1H), 5. 03 (s, 2H), 5. 15 (m, 1H), 5. 27 (s, 0. 5H), 5. 32 (s, 0. 5H), 6. 22 (s, 0. 5H), 6. 66 (s, 0. 5H), 6. 87 (m, 2H), 7. 28 (m, 2H).

実施例 22 (3S)-3-((S)-2-(9-フルオレニルメトキシカルボニルアミノ)-4-メチルバレリルアミノ)-2-テトラヒドロフランノール(表-1の化合物番号51)の製造

融点: 150 - 153°C

IR (KBr, cm<sup>-1</sup>) : 3314, 1725, 1696, 1653, 1534.  
 NMR (CDCl<sub>3</sub>, δ) : 0. 93 (m, 6H), 1. 65 (m, 3H), 1. 91 (m, 1H), 2. 32 (m, 0. 7H), 2. 42 (m, 0. 3H), 3. 08 (s, 0. 3H), 3. 28 (d, J = 3 Hz, 0. 7H), 3. 86 (ddd, J = 7. 8 Hz, 7. 8 Hz, 7. 8 Hz, 0. 7H), 4. 01 (m, 0. 3H), 4. 08 - 4. 24 (m, 3H), 4. 32 - 4. 52 (m, 3H), 5. 27 (m, 2H), 6. 21 (s, 0. 3H), 6. 38 (s, 0. 7H), 7. 31 (m, 2H), 7. 40 (m, 2H), 7. 56 (dd, J = 7. 4 Hz, 2H), 7. 76 (d, J = 7. 4 Hz, 2H).

実施例 23 (3S)-3-((S)-4-メチル-2-テトラヒドロフ

ルフリルオキシカルボニルアミノバレリルアミノ) - 2 - テトラヒドロフラノール (表 - 1 の化合物番号 5 2) の製造

融点 : 40 - 43 °C

IR (KBr, cm<sup>-1</sup>) : 3308, 1705, 1659, 1543.

5 NMR (CDCl<sub>3</sub>, δ) : 0. 94 (m, 6 H), 1. 46 - 2. 0  
7 (m, 8 H), 2. 32 (m, 0. 5 H), 2. 46 (m, 0. 5 H)  
, 3. 36 (s, 0. 5 H), 3. 39 (s, 0. 5 H), 3. 78 - 4  
. 25 (m, 8 H), 4. 29 - 4. 42 (m, 1 H), 5. 28 (m,  
1. 5 H), 5. 40 (s, 0. 5 H), 6. 34 (s, 0. 5 H), 5  
10 . 56 (s, 0. 5 H).

実施例 24 (3S) - 3 - { (S) - 4 - メチル - 2 - (2 - テトラヒ  
ドロピラニルメトキシカルボニルアミノ) バレリルアミノ} - 2 - テトラ  
ヒドロフラノール (表 - 1 の化合物番号 5 3) の製造

IR (KBr, cm<sup>-1</sup>) : 3306, 1705, 1659, 1539.

15 NMR (CDCl<sub>3</sub>, δ) : 0. 94 (m, 6 H), 1. 30 (m, 1  
H), 1. 53 (m, 3 H), 1. 68 (m, 4 H), 1. 84 (m, 2  
H), 2. 32 (m, 0. 5 H), 2. 47 (m, 0. 5 H), 3. 44  
(m, 1 H), 3. 55 (m, 1 H), 3. 65 (s, 0. 5 H), 3.  
74 (s, 0. 5 H), 3. 98 (ddd, J = 7. 8 Hz, 7. 8 Hz  
, 7. 8 Hz, 0. 5 H), 4. 00 (m, 3. 5 H), 4. 12 (m,  
2 H), 4. 35 (m, 1 H), 5. 28 (d, J = 3. 0 Hz, 0. 5  
H), 5. 31 (m, 1 H), 5. 46 (m, 0. 5 H), 6. 45 (s  
, 0. 5 H), 6. 61 (m, 0. 5 H).

実施例 25 (3S) - 3 - { (S) - 4 - メチル - 2 - (2 - ピリジル  
メトキシカルボニルアミノ) バレリルアミノ} - 2 - テトラヒドロフラノ  
ール (表 - 1 の化合物番号 5 4) の製造

融点 : 54 - 56 °C

IR (KBr, cm<sup>-1</sup>) : 3306, 1711, 1657, 1541.  
 NMR (CDCl<sub>3</sub>, δ) : 0.95 (m, 6H), 1.53 (m, 2H), 1.68 (m, 3H), 2.28 (m, 0.5H), 2.47 (m  
 5, 0.5H), 3.85 (ddd, J = 8.1 Hz, 8.1 Hz, 8.1 Hz, 0.5H), 3.97 (ddd, J = 8.1 Hz, 8.1 Hz, 8.1 Hz, 0.5H), 4.08 - 4.44 (m, 3H), 5.10 - 5.36 (m, 3H), 5.75 (s, 1H), 6.67 (s, 0.5H)  
 , 6.69 (s, 0.5H), 7.19 - 7.40 (m, 2H), 7.69 (m, 1H), 8.50 (d, J = 3.9 Hz, 0.5H), 8.56  
 10 (d, J = 3.9 Hz, 0.5H).

実施例 26 3- { (S)-4-メチル-2-(2-ピリジルメトキシカルボニルアミノ) バレリルアミノ} -2-テトラヒドロフラノール N-

オキシド (表-1 の化合物番号 57) の製造

15 NMR (CDCl<sub>3</sub>, δ) : 0.93 (m, 6H), 1.50 - 1.92 (m, 4H), 2.10 - 2.48 (m, 1H), 2.86 (s, 0.8H), 3.30 (s, 0.2H), 3.84 (m, 1H), 4.08 (m, 1H), 4.36 (m, 2H), 5.10 - 5.68 (m, 3H),  
 5.99 (s, 0.5H), 6.12 (s, 0.3H), 6.30 (m, 0.2H), 6.82 - 7.07 (m, 1H), 7.35 (m, 3H),  
 20 8.28 (d, J = 8.6 Hz, 1H).

実施例 27 (3S)-3- { (S)-2-シクロヘキシルオキシカルボニルアミノ-4-メチルバレリルアミノ} -2-テトラヒドロフラノール  
 (表-1 の化合物番号 60) の製造

25 融点 : 28 - 30 °C

IR (KBr, cm<sup>-1</sup>) : 3310, 1696, 1657, 1539.

- NMR (CDCl<sub>3</sub>, δ) : 0. 95 (m, 6 H), 1. 29 (m, 2 H), 1. 36 (m, 4 H), 1. 53 (m, 2 H), 1. 69 (m, 4 H), 1. 85 (m, 2 H), 2. 36 (m, 0. 5 H), 2. 48 (m, 0. 5 H), 2. 85 (s, 0. 5 H), 3. 06 (s, 0. 5 H),  
 5 3. 89 (ddd, J=7. 8 Hz, 7. 8 Hz, 7. 8 Hz, 0. 5 H), 4. 02 (m, 0. 5 H), 4. 14 (m, 2 H), 4. 36 (m, 1 H), 4. 63 (m, 1 H), 4. 99 (m, 1 H), 5. 26 (m, 0. 5 H), 5. 32 (m, 0. 5 H), 6. 22 (s, 0. 5 H), 6. 47 (s, 0. 5 H).
- 10 実施例 28 (3S)-3-((S)-4-メチル-2-フェノキシカルボニルアミノバレリルアミノ)-2-テトラヒドロフラノール(表-1の化合物番号 61)の製造  
 融点: 68-70°C  
 IR (KBr, cm<sup>-1</sup>) : 3308, 1723, 1659, 1539.
- 15 NMR (CDCl<sub>3</sub>, δ) : 0. 98 (m, 6 H), 1. 52 (m, 1 H), 1. 58-1. 86 (m, 3 H), 2. 30-2. 52 (m, 1 H), 2. 98 (s, 0. 6 H), 3. 23 (s, 0. 4 H), 3. 89 (ddd, J=7. 8 Hz, 7. 8 Hz, 7. 8 Hz, 0. 6 H), 4. 01 (ddd, J=7. 8 Hz, 7. 8 Hz, 7. 8 Hz, 0. 4 H), 4. 09-4. 27 (m, 2 H), 4. 38 (m, 1 H), 5. 27 (d, J=2. 7 Hz, 0. 4 H), 5. 33 (dd, J=3. 6 Hz, 3. 6 Hz, 0. 6 H), 5. 60 (s, 1 H), 6. 10 (s, 0. 4 H), 6. 24 (s, 0. 6 H), 7. 12 (m, 2 H), 7. 20 (m, 1 H), 7. 35 (m, 2 H).
- 20 実施例 29 (3S)-3-((S)-4-メチル-2-フェニルウレイドバレリルアミノ)-2-テトラヒドロフラノール(表-1の化合物番号 62)の製造  
 融点: 68-70°C  
 IR (KBr, cm<sup>-1</sup>) : 3308, 1723, 1659, 1539.
- 25 NMR (CDCl<sub>3</sub>, δ) : 0. 98 (m, 6 H), 1. 52 (m, 1 H), 1. 58-1. 86 (m, 3 H), 2. 30-2. 52 (m, 1 H), 2. 98 (s, 0. 6 H), 3. 23 (s, 0. 4 H), 3. 89 (ddd, J=7. 8 Hz, 7. 8 Hz, 7. 8 Hz, 0. 6 H), 4. 01 (ddd, J=7. 8 Hz, 7. 8 Hz, 7. 8 Hz, 0. 4 H), 4. 09-4. 27 (m, 2 H), 4. 38 (m, 1 H), 5. 27 (d, J=2. 7 Hz, 0. 4 H), 5. 33 (dd, J=3. 6 Hz, 3. 6 Hz, 0. 6 H), 5. 60 (s, 1 H), 6. 10 (s, 0. 4 H), 6. 24 (s, 0. 6 H), 7. 12 (m, 2 H), 7. 20 (m, 1 H), 7. 35 (m, 2 H).

## 63) の製造

融点: 181 - 182°C

IR (KBr, cm<sup>-1</sup>) : 3291, 1638, 1555.

NMR (CDCl<sub>3</sub>, δ) : 0. 96 (m, 6H), 1. 50 (m, 2H), 1. 67 (m, 1H), 1. 86 (m, 1H), 2. 26 (m, 0. 5H), 2. 41 (m, 0. 5H), 2. 88 (s, 0. 5H), 3. 40 (s, 0. 5H), 3. 82 (ddd, J=7. 8Hz, 7. 8Hz, 7. 8Hz, 0. 5H), 4. 07 (m, 1. 5H), 4. 29 (m, 2H), 5. 20 (s, 0. 5H), 5. 26 (d, J=4. 5Hz, 0. 5H), 5. 98 (m, 1H), 7. 02 (m, 1H), 7. 24 (m, 5H), 7. 73 (s, 0. 5H), 7. 91 (s, 0. 5H).

実施例 30 (3S)-3-{(S)-2-(3, 3-ジメチルブチリルアミノ)-4-メチルバレリルアミノ}-2-テトラヒドロフラノール (表-1の化合物番号 73) の製造

15 融点: 152 - 153°C

IR (KBr, cm<sup>-1</sup>) : 3293, 1642, 1549.

NMR (CDCl<sub>3</sub>, δ) : 0. 93 (m, 6H), 1. 02 (s, 9H), 1. 49 - 1. 94 (m, 4H), 2. 07 (s, 1H), 2. 08 (s, 1H), 2. 32 (m, 0. 5H), 2. 45 (m, 0. 5H), 3. 17 (d, J=3. 0Hz, 0. 5H), 3. 73 (d, J=3. 0Hz, 0. 5H), 3. 87 (ddd, J=7. 8Hz, 7. 8Hz, 7. 8Hz, 0. 5H), 4. 02 (m, 0. 5H), 4. 10 (m, 1H), 4. 23 - 4. 54 (m, 3H), 5. 28 (d, J=2. 4Hz, 0. 5H), 5. 31 (dd, J=2. 4Hz, 2. 4Hz, 0. 5H), 6. 62 (s, 0. 5H), 6. 69 (s, 0. 5H).

実施例 31 (3S)-3-{(S)-4-メチル-2-テトラデカノイ

ルアミノバレリルアミノ) - 2 - テトラヒドロフラノール (表 - 1 の化合物番号 78) の製造

融点 : 96 - 98 °C

IR (KBr, cm<sup>-1</sup>) : 3292, 1636, 1543.

5 NMR (CDCl<sub>3</sub>, δ) : 0.88 (t, J = 5.3 Hz, 3 H),  
0.94 (m, 6 H), 1.25 (m, 22 H), 1.51 - 1.94 (m, 4 H), 2.20 (m, 2 H), 2.31 (m, 0.5 H), 2.43 (m, 0.5 H), 3.10 (d, J = 2.7 Hz, 0.5 H), 3.65 (d, J = 2.7 Hz, 0.5 H), 3.87 (ddd, J = 7.8 Hz, 7.8 Hz, 7.8 Hz, 0.5 H), 4.00 (ddd, J = 7.8 Hz, 7.8 Hz, 7.8 Hz, 0.5 H), 4.11 (m, 1 H),  
10 4.26 - 4.55 (m, 2 H), 5.27 (d, J = 2.7 Hz, 0.5 H), 5.31 (dd, J = 4.1 Hz, 4.1 Hz, 0.5 H),  
5.97 (s, 1 H), 6.52 (s, 0.5 H), 6.62 (s, 0.5 H),  
15 5 H).

実施例 32 (3S) - 3 - { (S) - 4 - メチル - 2 - (3 - フェニルプロピオニルアミノ) バレリルアミノ} - 2 - テトラヒドロフラノール (表 - 1 の化合物番号 83) の製造

融点 : 60 - 62 °C

20 IR (KBr, cm<sup>-1</sup>) : 3291, 1644, 1549.

NMR (CDCl<sub>3</sub>, δ) : 0.89 (m, 6 H), 1.81 (m, 1 H), 1.44 - 1.62 (m, 3 H), 2.28 - 2.46 (m, 1 H), 2.50 (m, 2 H), 2.77 (s, 0.6 H), 2.93 (m, 2 H), 3.08 (s, 0.4 H), 3.87 (ddd, J = 7.8 Hz, 7.8 Hz, 7.8 Hz, 0.6 H), 4.05 (ddd, J = 7.8 Hz, 7.8 Hz, 7.8 Hz, 0.4 H), 4.12 (m, 1 H), 4

. 24 - 4. 48 (m, 2 H), 5. 24 (s, 0. 4 H), 5. 29 (m, 0. 6 H), 5. 79 (m, 1 H), 6. 28 (d, J = 7. 5 Hz, 0. 4 H), 6. 45 (d, J = 7. 5 Hz, 0. 6 H), 7. 23 (m, 5 H).

5 実施例 33 (3 S) - 3 - { (S) - 4 - メチル - 2 - (1 - ナフチルアセチルアミノ) バレリルアミノ} - 2 - テトラヒドロフラノール (表 - 1 の化合物番号 85) の製造

融点 : 164 - 167°C

IR (KBr, cm<sup>-1</sup>) : 3279, 1638.

10 NMR (CDCl<sub>3</sub>, +DMSO-d<sub>6</sub>, δ) : 0. 76 (d, J = 6. 0 Hz, 3 H), 0. 78 (d, J = 5. 8 Hz, 3 H), 1. 35 (m, 2 H), 1. 48 (m, 1 H), 1. 72 (m, 1 H), 2. 19 (m, 0. 7 H), 2. 31 (m, 0. 3 H), 3. 78 (ddd, J = 8. 0 Hz, 8. 0 Hz, 8. 0 Hz, 0. 7 H), 3. 85 (ddd, J = 8. 0 Hz, 8. 0 Hz, 8. 0 Hz, 0. 3 H), 3. 97 - 4. 09 (m, 3 H), 4. 20 (m, 1 H), 4. 41 (m, 1 H), 5. 09 (d, J = 4. 0 Hz, 0. 3 H), 5. 15 (d, J = 3. 7 Hz, 0. 3 H), 5. 22 (dd, J = 4. 4 Hz, 4. 4 Hz, 0. 7 H), 5. 38 (d, J = 4. 3 Hz, 0. 7 H), 6. 42 (d, J = 7. 8 Hz, 0. 7 H), 6. 56 (d, J = 9. 0 Hz, 0. 3 H), 6. 71 (d, J = 7. 4 Hz, 0. 7 H), 6. 97 (d, J = 7. 2 Hz, 0. 3 H), 7. 42 - 7. 53 (m, 4 H), 7. 55 - 7. 88 (m, 2 H), 7. 98 (d, J = 7. 4 Hz, 1 H).

実施例 34 (3 S) - 3 - { (S) - 4 - メチル - 2 - フェノキシアセチルアミノバレリルアミノ} - 2 - テトラヒドロフラノール (表 - 1 の化合物番号 90) の製造

融点：30°C

IR (KBr, cm<sup>-1</sup>) : 3297, 1653.

NMR (CDCl<sub>3</sub>, δ) : 0.92 (d, J=6.0Hz, 3H),

0.92 (d, J=5.7Hz, 3H), 1.55-1.70 (m, 2H)

5 1.84 (m, 2H), 2.32 (m, 0.6H), 2.45 (m,

0.4H), 3.87 (ddd, J=7.8Hz, 7.8Hz, 7.8H

z, 0.6H), 4.01 (ddd, J=7.8Hz, 7.8Hz, 7.

8Hz, 0.4H), 4.11 (m, 1H), 4.33 (m, 1H), 4

.51 (s, 0.8H), 4.52 (s, 1.2H), 4.55 (m, 1

10 H), 5.28 (s, 0.4H), 5.33 (d, J=4.5Hz, 0.

6H), 6.63 (d, J=7.5Hz, 0.4H), 6.68 (d, J

=8.1Hz, 0.6H), 6.93 (m, 2H), 7.03 (m, 2H)

), 7.31 (m, 2H).

実施例35 (3S)-3-{(S)-2-(2-クロロフェノキシアセ

15 チルアミノ)-4-メチルバレリルアミノ}-2-テトラヒドロフラノ-

ル（表-1の化合物番号94）の製造

融点：49-52°C

IR (KBr, cm<sup>-1</sup>) : 3302, 3074, 1655, 1537.

NMR (CDCl<sub>3</sub>, δ) : 0.94 (m, 6H), 1.60-1.9

20 1 (m, 4H), 2.31 (m, 0.7H), 2.45 (m, 0.3H)

, 3.27 (d, J=2.7Hz, 0.3H), 3.72 (d, J=2.

7Hz, 0.7H), 3.87 (ddd, J=7.8Hz, 7.8Hz,

7.8Hz, 0.7H), 4.06 (ddd, J=7.8Hz, 7.8H

z, 7.8Hz, 0.3H), 4.11 (m, 1H), 4.40 (m, 1

25 H), 4.52 (m, 1H), 4.52 (s, 0.6H), 4.57 (s

, 1.4H), 5.29 (s, 0.3H), 5.33 (dd, J=3.6

H<sub>z</sub>, 3. 6 H<sub>z</sub>, 0. 7 H), 6. 49 (s, 0. 3 H), 6. 64 (s, 0. 7 H), 6. 90 (m, 1 H), 7. 02 (m, 1 H), 7. 26 (m, 2 H), 7. 41 (m, 1 H).

実施例 36 (3S)-3-((S)-2-(4-クロロフェノキシアセチルアミノ)-4-メチルバレリルアミノ)-2-テトラヒドロフラノール(表-1の化合物番号96)の製造

融点: 53-55°C

IR (KBr, cm<sup>-1</sup>): 3301, 1653, 1541.

NMR (CDCl<sub>3</sub>, δ): 0. 94 (m, 6 H), 1. 69-1. 88 (m, 4 H), 2. 32 (m, 0. 5 H), 2. 58 (m, 0. 5 H), 2. 91 (d, J=2. 8 Hz, 0. 5 H), 3. 28 (d, J=3. 0 Hz, 0. 5 H), 3. 88 (ddd, J=7. 8 Hz, 7. 8 Hz, 7. 8 Hz, 0. 5 H), 4. 06 (ddd, J=7. 8 Hz, 7. 8 Hz, 7. 8 Hz, 0. 5 H), 4. 12 (m, 1 H), 4. 34 (m, 1 H), 4. 47 (s, 1 H), 4. 49 (s, 1 H), 4. 53 (m, 1 H), 5. 28 (d, J=2. 6 Hz, 0. 5 H), 5. 33 (dd, J=4. 5 Hz, 4. 5 Hz, 0. 5 H), 6. 29 (s, 0. 5 H), 6. 47 (s, 0. 5 H), 6. 88 (m, 3 H), 7. 27 (m, 2 H).

実施例 37 (3S)-3-((S)-4-メチル-2-フェニルチオアセチルアミノバレリルアミノ)-2-テトラヒドロフラノール(表-1の化合物番号110)の製造

融点: 45-47°C

IR (KBr, cm<sup>-1</sup>): 3287, 1645, 1551.

NMR (CDCl<sub>3</sub>, δ): 0. 81 (m, 6 H), 1. 35 (m, 1 H), 1. 52 (m, 2 H), 1. 70 (m, 1 H), 2. 25 (m, 0. 5 H), 2. 39 (m, 0. 5 H), 3. 23 (s, 0. 5 H), 3.

6.6 (m, 2.5 H), 3.85 (ddd, J = 7.8 Hz, 7.8 Hz, 7.8 Hz, 0.5 H), 3.96 (ddd, J = 7.8 Hz, 7.8 Hz, 7.8 Hz, 0.5 H), 4.09 (m, 1 H), 4.40 - 4.42 (m, 2 H), 5.23 (d, J = 2.3 Hz, 0.5 H), 5.28 (dd, J = 3.9 Hz, 3.9 Hz, 0.5 H), 6.39 (s, 0.5 H), 6.53 (s, 0.5 H), 7.10 (m, 1 H), 7.21 (m, 1 H), 7.29 (m, 3 H), 7.30 (s, 1 H).

実施例 38 (3S)-3-{(S)-4-メチル-2-(3-フェニルスルホニルプロピオニルアミノ)バレリルアミノ}-2-テトラヒドロフラノール（表-1の化合物番号 111）の製造

IR (KBr, cm<sup>-1</sup>) : 3301, 1649, 1547.  
 NMR (CDCl<sub>3</sub>, δ) : 0.93 (m, 6 H), 1.48 - 1.74 (m, 5 H), 1.80 - 1.92 (m, 1 H), 2.30 (m, 0.5 H), 2.43 (m, 0.5 H), 2.72 (m, 2 H), 3.41 (m, 1 H), 3.52 (m, 1 H), 3.86 (ddd, J = 8.1 Hz, 8.1 Hz, 0.5 H), 4.02 (m, 0.5 H), 4.09 (m, 2 H), 4.28 - 4.48 (m, 2 H), 5.29 (s, 0.5 H), 5.33 (dd, J = 4.2 Hz, 4.2 Hz, 0.5 H), 6.27 (s, 1 H), 6.46 (s, 0.5 H), 6.58 (s, 0.5 H), 7.59 (m, 2 H), 7.69 (m, 1 H), 7.93 (dd, J = 7.2 Hz, 5.4 Hz, 2 H).

実施例 39 (3S)-3-{(S)-2-ベンゾイルアミノ-4-メチルバレリルアミノ}-2-テトラヒドロフラノール（表-1の化合物番号 112）の製造

融点 : 154 - 156 °C

IR (KBr, cm<sup>-1</sup>) : 3300, 1665, 1636.

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NMR (CDCl<sub>3</sub>, δ) : 0. 98 (d, J = 5. 5 Hz, 6 H),  
 1. 71 (m, 3 H), 1. 87 (m, 1 H), 2. 31 (m, 0. 7 H),  
 2. 42 (m, 0. 3 H), 3. 16 (s, 0. 3 H), 3. 60 (s, 0. 7 H), 3. 87 (ddd, J = 8. 2 Hz, 8. 2 Hz, 8.  
 5 Hz, 0. 7 H), 4. 03 (ddd, J = 7. 5 Hz, 7. 5 Hz,  
 7. 5 Hz, 0. 3 H), 4. 12 (ddd, J = 8. 6 Hz, 8. 6 Hz,  
 3. 5 Hz, 1 H), 4. 36 (m, 1 H), 4. 68 (m, 1 H),  
 5. 30 (s, 0. 3 H), 5. 35 (d, J = 4. 7 Hz, 0. 7 H),  
 6. 67 - 6. 75 (m, 2 H), 7. 43 (m, 2 H), 7. 52  
 (m, 1 H), 7. 79 (m, 2 H).

実施例 40 (3S)-3-{(S)-2-(2-フルオロベンゾイルアミノ)-4-メチルバレリルアミノ}-2-テトラヒドロフラノール（表-1 の化合物番号 113）の製造

融点：62 - 64 °C

IR (KBr, cm<sup>-1</sup>) : 3306, 1644, 1534.

NMR (CDCl<sub>3</sub>, δ) : 0. 80 - 1. 07 (m, 6 H), 1. 59 - 2. 01 (m, 4 H), 2. 40 (m, 1 H), 3. 82 (m, 1 H), 3. 97 - 4. 20 (m, 1. 6 H), 4. 24 - 4. 45 (m, 1. 4 H), 4. 68 (m, 1 H), 5. 31 (d, J = 2. 5 Hz, 0. 6 H), 5. 35 (dd, J = 4. 2 Hz, 4. 1 Hz, 0. 4 H), 6. 87 (m, 1 H), 7. 02 - 7. 20 (m, 2 H), 7. 25 (m, 1 H), 7. 50 (m, 1 H), 8. 00 (m, 1 H).

実施例 41 (3S)-3-{(S)-2-(3-フルオロベンゾイルアミノ)-4-メチルバレリルアミノ}-2-テトラヒドロフラノール（表-1 の化合物番号 114）の製造

融点：159 - 161 °C

IR (KBr, cm<sup>-1</sup>) : 3304, 3076, 1638, 1588,  
1547.

NMR (CDCl<sub>3</sub>, δ) : 0.87 - 1.07 (m, 6H), 1.6  
1 - 1.98 (m, 4H), 2.39 (m, 1H), 3.39 (d, J =  
5 2.6 Hz, 0.5H), 3.87 (m, 1H), 3.98 - 4.18 (m,  
1.5H), 4.35 (m, 1H), 4.67 (m, 1H), 5.31 (d,  
J = 2.6 Hz, 0.5H), 5.35 (dd, J = 4.1 Hz,  
4.1 Hz, 0.5H), 6.71 (d, J = 7.6 Hz, 0.5H)  
6.76 (d, J = 7.6 Hz, 0.5H), 6.90 (d, J = 8.  
10 2 Hz, 0.5H), 6.99 (d, J = 8.2 Hz, 0.5H), 7.  
20 20 (ddd, J = 8.2 Hz, 8.2 Hz, 2.7 Hz, 1H), 7.  
40 (m, 1H), 7.43 - 7.60 (m, 2H).

実施例42 (3S)-3-{(S)-2-(4-フルオロベンゾイルアミノ)-4-メチルバレリルアミノ}-2-テトラヒドロフラノール(表  
15 - 1の化合物番号115)の製造

融点: 151 - 153°C

IR (KBr, cm<sup>-1</sup>) : 3422, 3301, 1640, 1545,  
1503.

NMR (CDCl<sub>3</sub>, δ) : 0.85 - 1.17 (m, 6H), 1.6  
20 0 - 1.97 (m, 4H), 2.37 (m, 1H), 3.79 (d, J =  
2.7 Hz, 0.55H), 3.87 (m, 0.55H), 4.06 (m  
, 0.45H), 4.10 (m, 1H), 4.27 (ddd, J = 6.8  
Hz, 6.8 Hz, 2.1 Hz, 0.45H), 4.39 (m, 1H),  
5.31 (d, J = 2.7 Hz, 0.55H), 5.35 (d, J = 4.  
25 1 Hz, 4.1 Hz, 0.45H), 6.28 (d, J = 8.3 Hz, 0  
.45H), 6.96 (d, J = 8.3 Hz, 0.55H), 7.02 -

7. 19 (m, 3 H), 7. 75 - 7. 89 (m, 2 H).

実施例 4 3 (3 S) - 3 - { (S) - 2 - (4 - クロロベンゾイルアミノ) - 4 - メチルバレリルアミノ} - 2 - テトラヒドロフラノール (表 - 1 の化合物番号 121) の製造

5 融点 : 93 - 96 °C

IR (KBr, cm<sup>-1</sup>) : 3295, 1636.

NMR (CDCl<sub>3</sub>, δ) : 0. 95 (d, J = 6. 0 Hz, 3 H),  
 0. 97 (d, J = 5. 7 Hz, 3 H), 1. 73 (m, 3 H), 1. 8  
 6 (m, 1 H), 2. 31 (m, 0. 7 H), 2. 42 (m, 0. 3 H)  
 10 , 3. 41 (s, 0. 3 H), 3. 86 (s, 0. 7 H), 3. 87 (d  
 d d, J = 8. 4 Hz, 8. 4 Hz, 8. 4 Hz, 0. 7 H), 4. 02  
 (ddd, J = 7. 8 Hz, 7. 8 Hz, 7. 8 Hz, 0. 3 H), 4.  
 12 (m, 1 H), 4. 35 (m, 1 H), 4. 68 (m, 1 H), 5.  
 30 (s, 0. 3 H), 5. 35 (d, J = 4. 5 Hz, 0. 7 H), 6  
 15 . 71 (d, J = 8. 1 Hz, 0. 7 H), 6. 76 (d, J = 6. 9 H  
 z, 0. 3 H), 6. 87 (d, J = 6. 4 Hz, 0. 7 H), 6. 95  
 (d, J = 8. 1 Hz, 0. 3 H), 7. 39 (dd, J = 8. 4 Hz,  
 1. 8 Hz, 2 H), 7. 73 (dd, J = 8. 4 Hz, 2. 1 Hz, 2  
 H).

20 実施例 4 4 (3 S) - 3 - { (S) - 4 - メチル - 2 - (2 - メチルベ  
 ンゾイルアミノ) バレリルアミノ} - 2 - テトラヒドロフラノール (表 -  
 1 の化合物番号 125) の製造

融点 : 73 - 74 °C

IR (KBr, cm<sup>-1</sup>) : 3293, 1638, 1541.

25 NMR (CD<sub>3</sub>OD, δ) : 0. 98 (d, J = 6. 1 Hz, 6 H),  
 1. 50 - 1. 99 (m, 4 H), 2. 30 (m, 1 H), 2. 38 (s

3 4 4

, 1. 65H), 2. 39 (s, 1. 35H), 3. 85 (m, 0. 55H), 3. 98 - 4. 17 (m, 1. 45H), 4. 23 (m, 1H), 4. 60 (m, 1H), 5. 16 (s, 0. 55H), 5. 25 (d, J = 4. 7Hz, 0. 45H), 7. 18 - 7. 29 (m, 2H), 7. 30 - 7. 42 (m, 2H).

実施例45 (3S)-3-{(S)-4-メチル-2-(3-メチルベンゾイルアミノ)バレリルアミノ}-2-テトラヒドロフラノール(表-1の化合物番号126)の製造

融点: 85 - 87°C

IR (KBr, cm<sup>-1</sup>) : 3299, 1638, 1586, 1541.  
 NMR (CDCl<sub>3</sub>, δ) : 0. 83 - 1. 07 (m, 6H), 1. 60 - 1. 97 (m, 3H), 2. 07 (m, 1H), 2. 30 (m, 1H), 2. 35 (s, 1. 8H), 2. 36 (s, 1. 2H), 3. 82 (m, 0. 6H), 3. 96 - 4. 18 (m, 1. 6H), 4. 18 - 4. 42 (m, 1. 4H), 4. 75 (m, 1H), 4. 93 (m, 0. 4H), 5. 31 (d, J = 2. 9Hz, 0. 6H), 5. 35 (dd, J = 4. 4Hz, 4. 3Hz, 0. 4H), 7. 01 (m, 1H), 7. 14 (m, 1H), 7. 32 - 7. 40 (m, 2H), 7. 57 - 7. 67 (m, 2H).

実施例46 (3S)-3-{(S)-4-メチル-2-(4-メチルベンゾイルアミノ)バレリルアミノ}-2-テトラヒドロフラノール(表-1の化合物番号127)の製造

融点: 101 - 102°C

IR (KBr, cm<sup>-1</sup>) : 3304, 1634, 1545, 1504.  
 NMR (CDCl<sub>3</sub>, δ) : 0. 87 - 1. 07 (m, 6H), 1. 60 - 1. 95 (m, 4H), 2. 37 (m, 1H), 2. 39 (s, 3H)

3 4 5

), 3. 45 (d, J=2. 9 Hz, 0. 6 H), 3. 90 (m, 0. 4 H), 3. 97 - 4. 19 (m, 2 H), 4. 38 (m, 1 H), 4. 71 (m, 1 H), 5. 30 (d, J=2. 9 Hz, 0. 6 H), 5. 35 (dd, J=6. 7 Hz, 6. 7 Hz, 0. 6 H), 6. 74 (d, J=8. 5 Hz, 0. 4 H), 6. 80 (d, J=8. 5 Hz, 1 H), 6. 89 (d, J=6. 7 Hz, 0. 6 H), 7. 22 (d, J=8. 2 Hz, 2 H), 7. 68 (d, J=8. 2 Hz, 2 H).

実施例4 7 (3S) - 3 - { (S) - 2 - (2, 6-ジメチルベンゾイルアミノ) - 4 - メチルバレリルアミノ} - 2 - テトラヒドロフラノール  
 10 (表-1の化合物番号129) の製造

融点: 89 - 91°C

IR (KBr, cm<sup>-1</sup>) : 3389, 1638, 1539.  
 NMR (CDCl<sub>3</sub>, δ) : 0. 83 - 1. 10 (m, 6 H), 1. 58 - 1. 99 (m, 4 H), 2. 25 (s, 3 H), 2. 27 (s, 3 H), 2. 32 (m, 1 H), 3. 65 - 3. 93 (m, 1. 55 H), 4. 07 (m, 1 H), 4. 22 - 4. 45 (m, 1. 45 H), 4. 70 (m, 1 H), 5. 25 (d, J=3. 1 Hz, 0. 55 H), 5. 31 (dd, J=4. 3 Hz, 4. 2 Hz, 0. 45 H), 6. 36 (d, J=8. 2 Hz, 1 H), 6. 85 - 7. 07 (m, 3 H), 7. 14 (d, J=7. 8 Hz, 7. 3 Hz, 1 H).

実施例4 8 (3S) - 3 - { (S) - 2 - (3, 4-ジメチルベンゾイルアミノ) - 4 - メチルバレリルアミノ} - 2 - テトラヒドロフラノール  
 20 (表-1の化合物番号130) の製造

融点: 92 - 94°C

IR (KBr, cm<sup>-1</sup>) : 3299, 1636, 1541.  
 NMR (CDCl<sub>3</sub>, δ) : 0. 83 - 1. 10 (m, 6 H), 1. 5

3 4 6

7 - 1. 99 (m, 4 H), 2. 28 (s, 3 H), 2. 29 (s, 3 H), 2. 34 (m, 1 H), 3. 57 (s, 0. 5 H), 3. 86 (m, 0. 5 H), 3. 97 - 4. 20 (m, 1. 5 H), 4. 21 - 4. 45 (m, 1. 5 H), 4. 70 (m, 1 H), 5. 31 (s, 0. 5 H),  
5 5. 35 (d, J = 2. 1 Hz, 0. 5 H), 6. 74 (d, J = 8. 3 Hz, 0. 5 H), 6. 80 (d, J = 8. 2 Hz, 0. 5 H), 6. 85 (d, J = 8. 5 Hz, 0. 5 H), 6. 93 (d, J = 7. 1 Hz, 0. 5 H), 7. 17 (d, J = 7. 8 Hz, 1 H), 7. 43 - 7. 60 (m, 2 H).

10 実施例 49 (3 S) - 3 - { (S) - 4 - メチル - 2 - (2, 4, 6 - トリメチルベンゾイルアミノ) バレリルアミノ} - 2 - テトラヒドロフラノール (表 - 1 の化合物番号 131) の製造

融点 : 150 - 152 °C

IR (KBr, cm<sup>-1</sup>) : 3295, 1638, 1522.

15 NMR (CDCl<sub>3</sub>, δ) : 0. 87 - 1. 07 (m, 6 H), 1. 58 - 1. 97 (m, 4 H), 2. 18 - 2. 35 (m, 9 H), 2. 36 (m, 1 H), 3. 09 (s, 0. 45 H), 3. 48 (s, 0. 55 H), 3. 85 (m, 0. 55 H), 3. 97 - 4. 20 (m, 1. 45 H), 4. 35 (m, 1 H), 4. 65 (m, 1 H), 5. 29 (d, J = 2. 5 Hz, 0. 45 H), 5. 34 (dd, J = 4. 1 Hz, 3. 8 Hz, 0. 55 H), 6. 08 (d, J = 5. 2 Hz, 1 H), 6. 75 (m, 1 H), 6. 83 (s, 2 H).

20 実施例 50 (3 S) - 3 - { (S) - 2 - (4 - エチルベンゾイルアミノ) - 4 - メチルバレリルアミノ} - 2 - テトラヒドロフラノール (表 - 1 の化合物番号 134) の製造

25 融点 : 98 - 99 °C

3 4 7

IR (KBr, cm<sup>-1</sup>) : 3304, 1672, 1634, 1545,  
1505.

NMR (CDCl<sub>3</sub>, δ) : 0.83 - 1.05 (m, 6H), 1.2  
3 (t, J = 7.6 Hz, 3H), 1.60 - 1.99 (m, 4H), 2  
5 . 38 (m, 1H), 2.68 (q, J = 7.6 Hz, 2H), 3.34  
(s, 0.4H), 3.87 (m, 1H), 4.00 - 4.20 (m, 1  
6 H), 4.35 (m, 1H), 4.68 (m, 1H), 5.30 (s  
, 0.6H), 5.34 (d, J = 3.7 Hz, 0.4H), 6.65 -  
6.90 (m, 2H), 7.21 - 7.27 (m, 2H), 7.69 - 7  
10 . 74 (m, 2H).

実施例 5 1 (3S)-3-{(S)-4-メチル-2-(4-トリフル  
オロメチルベンゾイルアミノ)バレリルアミノ}-2-テトラヒドロフラ  
ノール(表-1の化合物番号137)の製造

融点: 135 - 136°C

IR (KBr, cm<sup>-1</sup>) : 3310, 1640, 1548, 1508.

NMR (CDCl<sub>3</sub>, δ) : 0.87 - 1.07 (m, 6H), 1.6  
1 - 1.97 (m, 4H), 2.37 (m, 1H), 3.43 (s, 0.  
4H), 3.82 - 4.08 (m, 1.6H), 4.17 (m, 1H),  
4.29 (m, 1H), 4.70 (m, 1H), 5.31 (d, J = 2.  
6 Hz, 0.4H), 5.36 (d, J = 4.2 Hz, 4.2 Hz, 0.  
6H), 6.71 (d, J = 7.9 Hz, 0.6H), 6.73 (d, J  
= 7.9 Hz, 0.4H), 7.03 (d, J = 8.3 Hz, 0.6H)  
, 7.14 (d, J = 8.3 Hz, 0.4H), 7.61 - 7.86 (m  
, 2H), 7.87 - 7.93 (m, 2H).

実施例 5 2 (3S)-3-{(S)-2-(2-メトキシベンゾイルア  
ミノ)-4-メチルバレリルアミノ}-2-テトラヒドロフラノール(表

## - 1 の化合物番号 138) の製造

融点 : 65 - 66 °C

IR (KBr, cm<sup>-1</sup>) : 3376, 1640, 1601, 1532.  
 NMR (CDCl<sub>3</sub>, δ) : 0.83 - 1.05 (m, 6H), 1.6  
 5 0 - 1.95 (m, 4H), 2.31 (m, 1H), 3.85 (m, 0.  
 6 H), 3.98 (s, 3H), 4.00 - 4.20 (m, 1.6 H),  
 4.24 - 4.45 (m, 1.4 H), 4.69 (m, 1H), 5.00  
 (m, 0.4 H), 5.34 (m, 1H), 6.93 - 7.17 (m, 2  
 .4 H), 7.22 (m, 0.6 H), 7.50 (m, 1H), 8.15  
 10 (m, 1H), 8.30 (m, 1H).

実施例 53 (3S)-3-{(S)-2-(4-メトキシベンゾイルア  
 ミノ)-4-メチルバレリルアミノ}-2-テトラヒドロフラノール (表  
 - 1 の化合物番号 140) の製造

融点 : 85 - 88 °C

IR (KBr, cm<sup>-1</sup>) : 3295, 1632.  
 NMR (CDCl<sub>3</sub>, δ) : 0.95 (d, J = 6.0 Hz, 3H),  
 0.96 (d, J = 4.8 Hz, 3H), 1.72 (m, 3H), 1.8  
 6 (m, 1H), 2.29 (m, 0.5 H), 2.40 (m, 0.5 H)  
 , 3.84 (s, 3H), 3.86 (ddd, J = 8.1 Hz, 8.1 H  
 z, 8.1 Hz, 0.5 H), 4.01 (ddd, J = 8.1 Hz, 8.  
 1 Hz, 8.1 Hz, 0.5 H), 4.08 (m, 1H), 4.28 (m  
 , 0.5 H), 4.35 (m, 0.5 H), 4.68 (m, 1H), 5.  
 30 (s, 0.5 H), 5.34 (d, J = 4.8 Hz, 0.5 H), 6  
 .71 (d, J = 8.4 Hz, 0.5 H), 6.78 (d, J = 8.4 H  
 z, 0.5 H), 6.82 (d, J = 8.1 Hz, 0.5 H), 6.91  
 (dd, J = 9.0 Hz, 2.4 Hz, 2H), 6.94 (d, J = 8.

7 Hz, 0. 5 H), 7. 76 (m, 2 H).

実施例 54 (3 S) - 3 - { (S) - 2 - (2, 4-ジメトキシベンゾイルアミノ) - 4 - メチルバレリルアミノ} - 2 - テトラヒドロフラノール (表-1 の化合物番号 141) の製造

5 融点: 65 - 67 °C

IR (KBr, cm<sup>-1</sup>): 3382, 1638, 1604, 1534.

NMR (CDCl<sub>3</sub>, δ): 0. 83 - 1. 05 (m, 6 H), 1. 59 - 1. 98 (m, 4 H), 2. 40 (m, 1 H), 3. 83 (m, 0. 6 H), 3. 84 (s, 1. 2 H), 3. 86 (s, 1. 8 H), 3. 95 (s, 1. 8 H), 3. 97 (s, 1. 2 H), 4. 00 - 4. 21 (m, 2 H), 4. 35 (m, 1 H), 4. 65 (m, 1 H), 4. 80 (m, 0. 4 H), 5. 32 (d, J = 3. 2 Hz, 0. 6 H), 5. 35 (dd, J = 4. 6 Hz, 4. 6 Hz, 0. 5 H), 6. 48 (s, 0. 4 H), 6. 49 (s, 0. 6 H), 6. 59 (m, 1 H), 6. 99 (d, J = 8. 1 Hz, 0. 6 H), 7. 15 (d, J = 6. 7 Hz, 0. 4 H), 8. 07 - 8. 22 (m, 2 H).

実施例 55 (3 S) - 3 - { (S) - 2 - (2, 6-ジメトキシベンゾイルアミノ) - 4 - メチルバレリルアミノ} - 2 - テトラヒドロフラノール (表-1 の化合物番号 142) の製造

20 融点: 166 - 168 °C

IR (KBr, cm<sup>-1</sup>): 3299, 3279, 1645, 1597, 1508.

NMR (DMSO-d<sub>6</sub>, δ): 0. 87 (d, J = 6. 2 Hz, 6 H), 1. 38 - 1. 60 (m, 2 H), 1. 60 - 1. 83 (m, 2 H), 2. 15 (m, 1 H), 3. 65 (m, 1 H), 3. 71 (s, 2. 4 H), 3. 72 (s, 3. 6 H), 3. 93 (m, 1 H), 4. 10 (m

350

, 1 H), 4. 39 (m, 1 H), 5. 14 (m, 1 H), 6. 55 (m, 1 H), 6. 58 - 6. 70 (m, 2 H), 7. 18 (d, J = 5. 7 Hz, 1 H), 7. 29 (m, 1 H), 8. 33 (d, J = 8. 4 Hz, 1 H).

5 実施例 5 6 (3 S) - 3 - { (S) - 2 - (3, 5-ジメトキシベンゾイルアミノ) - 4-メチルバレリルアミノ} - 2-テトラヒドロフラノール(表-1の化合物番号144)の製造

融点: 88 - 90°C

IR (KBr, cm<sup>-1</sup>): 3407, 1639, 1595, 1539.

10 NMR (CDCl<sub>3</sub>, δ): 0. 83 - 1. 05 (m, 6 H), 1. 60 - 1. 98 (m, 4 H), 2. 40 (m, 1 H), 3. 41 (s, 0. 6 H), 3. 70 - 3. 93 (m, 0. 8 H), 3. 79 (s, 6 H), 3. 95 - 4. 08 (m, 0. 6 H), 4. 10 (m, 1 H), 4. 25 (m, 1 H), 4. 65 (m, 1 H), 5. 30 (d, J = 2. 2 Hz, 0. 6 H), 5. 34 (m, 0. 4 H), 6. 58 (dd, J = 1. 9 Hz, 1. 9 Hz, 1 H), 6. 67 - 6. 87 (m, 2 H), 6. 87 - 6. 97 (m, 2 H).

15 実施例 5 7 (3 S) - 3 - { (S) - 2 - (4-エトキシベンゾイルアミノ) - 4-メチルバレリルアミノ} - 2-テトラヒドロフラノール(表-1の化合物番号148)の製造

融点: 84 - 85°C

IR (KBr, cm<sup>-1</sup>): 3299, 1634, 1609, 1547, 1504.

20 NMR (CDCl<sub>3</sub>, δ): 0. 83 - 1. 07 (m, 6 H), 1. 43 (t, J = 7. 0 Hz, 3 H), 1. 60 - 1. 99 (m, 4 H), 2. 38 (m, 1 H), 3. 82 (m, 1 H), 3. 92 - 4. 20 (m,

3. 5 H), 4. 55 (s, 0. 5 H), 4. 69 (m, 1 H), 5. 31 (d, J=2. 8 Hz, 0. 5 H), 5. 35 (dd, J=4. 3 Hz, 4. 1 Hz, 0. 5 H), 6. 80 (d, J=8. 3 Hz, 0. 5 H), 6. 84-7. 00 (m, 3 H), 7. 14 (d, J=7. 0 Hz, 0. 5 H), 7. 76 (d, J=8. 7 Hz, 2 H).

**実施例 5 8** (3 S)-3-{(S)-4-メチル-2-(3, 4-メチレンジオキシベンゾイルアミノ)バレリルアミノ}-2-テトラヒドロフラノール(表-1の化合物番号152)の製造

融点: 94-96°C

IR (KBr, cm<sup>-1</sup>): 3410, 3111, 1753, 1659.  
 NMR (CDCl<sub>3</sub>, δ): 0. 95 (d, J=6. 0 Hz, 3 H), 0. 96 (d, J=5. 1 Hz, 3 H), 1. 69-1. 81 (m, 3 H), 1. 86 (m, 1 H), 2. 30 (m, 0. 5 H), 2. 41 (m, 0. 5 H), 3. 89 (ddd, J=8. 1 Hz, 8. 1 Hz, 8. 1 Hz, 0. 5 H), 4. 05 (ddd, J=7. 6 Hz, 7. 6 Hz, 7. 6 Hz, 0. 5 H), 4. 11 (m, 1 H), 4. 30 (m, 0. 5 H), 4. 36 (m, 0. 5 H), 4. 64 (m, 1 H), 5. 30 (s, 0. 5 H), 5. 32 (d, J=4. 6 Hz, 0. 5 Hz), 6. 02 (s, 2 H), 6. 61-6. 80 (m, 2 H), 6. 82 (d, J=7. 8 Hz, 1 H), 7. 28 (dd, J=2. 7 Hz, 2. 7 Hz, 1 H), 7. 33 (ddd, J=8. 0 Hz, 2. 0 Hz, 2. 0 Hz, 1 H).

**実施例 5 9** (3 S)-3-{(S)-4-メチル-2-(1-ナフトイルアミノ)バレリルアミノ}-2-テトラヒドロフラノール(表-1の化合物番号156)の製造

融点: 85-86°C

IR (KBr, cm<sup>-1</sup>): 3293, 1638, 1535.

NMR (CDCl<sub>3</sub>, δ) : 0. 83 - 1. 05 (m, 6 H), 1. 5  
9 - 1. 99 (m, 4 H), 2. 38 (m, 1 H), 3. 47 (s, 0.  
45 H), 3. 88 (m, 1 H), 3. 94 - 4. 20 (m, 1. 55 H  
) , 4. 38 (m, 1 H), 4. 80 (m, 1 H), 5. 29 (d, J =  
5 2. 9 Hz, 0. 55 H), 5. 35 (dd, J = 4. 4 Hz, 3. 9 H  
z, 0. 45 H), 6. 64 (d, J = 8. 2 Hz, 0. 55 H), 6.  
73 (d, J = 8. 1 Hz, 0. 45 H), 6. 89 (m, 1 H), 7.  
44 (m, 1 H), 7. 47 - 7. 68 (m, 3 H), 7. 80 - 7. 9  
7 (m, 2 H), 8. 25 (m, 1 H).

10 実施例 60 (3S)-3-{(S)-4-メチル-2-(2-ナフトイ  
ルアミノ)バレリルアミノ}-2-テトラヒドロフラノール(表-1の化  
合物番号 157)の製造

融点: 98 - 100 °C

IR (KBr, cm<sup>-1</sup>) : 3293, 1640, 1539, 1512.  
15 NMR (CDCl<sub>3</sub>, δ) : 0. 83 - 1. 13 (m, 6 H), 1. 6  
0 - 1. 99 (m, 4 H), 2. 36 (m, 1 H), 3. 53 (s, 0.  
3 H), 3. 85 (m, 0. 7 H), 3. 99 - 4. 21 (m, 2 H),  
4. 40 (m, 1 H), 4. 80 (m, 1 H), 5. 34 (dd, J = 4  
. 4 Hz, 4. 3 Hz, 0. 3 H), 5. 38 (d, J = 2. 7 Hz, 0  
. 7 H), 6. 88 (d, J = 8. 5 Hz, 0. 7 H), 6. 96 (d,  
J = 7. 2 Hz, 0. 3 H), 7. 04 (d, J = 8. 3 Hz, 0. 7 H  
) , 7. 12 (d, J = 8. 2 Hz, 0. 3 H), 7. 43 - 7. 64 (  
m, 2 H), 7. 79 - 7. 97 (m, 4 H), 8. 32 (s, 1 H).  
実施例 61 (3S)-3-{(S)-2-(2-フロイルアミノ)-4  
-メチルバレリルアミノ}-2-テトラヒドロフラノール(表-1の化  
合物番号 161)の製造

融点 : 92 - 95 °C

IR (KBr, cm<sup>-1</sup>) : 3420, 3300, 1645, 1595,  
1529.

NMR (CDCl<sub>3</sub>, δ) : 0.85 - 1.05 (m, 6H), 1.5  
5 8 - 2.00 (m, 4H), 2.25 - 2.55 (m, 1H), 3.52  
(d, J = 2.7 Hz, 0.55 H), 3.87 (dt, J = 7.8 Hz  
, 7.8 Hz, 0.55 H), 3.95 - 4.17 (m, 1.9 H), 4  
.27 - 4.45 (m, 1H), 4.45 - 4.73 (m, 1H), 5.  
31 (d, J = 2.7 Hz, 0.55 H), 5.35 (dd, J = 4.0  
10 Hz, 4.0 Hz, 0.45 H), 6.51 (dd, J = 3.1 Hz, 1  
.4 Hz, 1H), 6.77 (d, J = 7.7 Hz, 1H), 6.80 -  
6.93 (m, 1H), 7.14 (dd, J = 3.1 Hz, 1.9 Hz,  
1H), 7.46 (dd, J = 1.9 Hz, 1.4 Hz, 1H).

実施例 62 (3S)-3-{(S)-2-(3-エチル-1-メチル-  
15 5-ピラゾール)カルボニルアミノ-4-メチルバレリルアミノ}-2-  
テトラヒドロフラノール(表-1の化合物番号170)の製造

融点 : 89 - 91 °C

IR (KBr, cm<sup>-1</sup>) : 3301, 1643.

NMR (CDCl<sub>3</sub>, δ) : 0.97 (d, J = 5.0 Hz, 6H),  
20 1.23 (t, J = 7.7 Hz, 2.1 H), 1.23 (t, J = 7.6  
Hz, 0.9 H), 1.60 - 1.90 (m, 4H), 2.34 (m, 0  
.7 H), 2.56 (m, 0.3 H), 2.62 (q, J = 7.6 Hz,  
2 H), 3.89 (ddd, J = 7.8 Hz, 7.8 Hz, 7.8 Hz,  
1 H), 4.01 - 4.17 (m, 2H), 4.08 (s, 0.9 H),  
25 4.08 (s, 2.1 H), 4.35 (m, 1H), 4.58 (m, 1H  
) , 5.29 (s, 0.3 H), 5.35 (d, J = 3.9 Hz, 0.7

H), 6.39 (s, 1H), 6.44 (d, J=6.8 Hz, 0.3H), 6.55 (d, J=8.4 Hz, 0.7H), 6.60 (d, J=8.4 Hz, 1H).

実施例 6 3 (3S)-3-((S)-2-(2-クロマンカルボニルア

ミノ-4-メチルバレリルアミノ)-2-テトラヒドロフラノール(表-

1 の化合物番号 175) の製造

融点: 84-85°C

IR (KBr, cm<sup>-1</sup>): 3299, 1786, 1532.

NMR (CDCl<sub>3</sub>, δ): 0.78-0.93 (m, 3H), 0.9

10 5-1.05 (m, 3H), 1.35-2.07 (m, 5H), 2.20  
-2.54 (m, 2H), 2.70-3.00 (m, 2H), 3.80-  
4.20 (m, 2H), 4.24-4.60 (m, 3H), 5.15 (m  
, 1H), 5.31 (m, 1H), 6.40 (m, 1H), 6.65 (m  
, 1H), 6.83-6.97 (m, 2H), 6.98-7.20 (m,  
2H).

実施例 6 4 (3S)-3-((S)-2-シンナモイルアミノ-4-メ  
チルバレリルアミノ)-2-テトラヒドロフラノール(表-1の化合物番  
号 182) の製造

融点: 102-104°C

20 IR (KBr, cm<sup>-1</sup>): 3293, 1651, 1624, 1543.

NMR (CDCl<sub>3</sub>, δ): 0.96 (m, 6H), 1.63-1.9

22 (m, 4H), 2.32 (m, 0.5H), 2.47 (m, 0.5H)  
, 3.35 (d, J=2.7 Hz, 0.5H), 3.43 (d, J=2.  
7 Hz, 0.5H), 3.92 (m, 1H), 4.02-4.18 (m,  
2H), 4.34 (m, 1H), 4.62 (m, 1H), 5.31 (s,  
0.5H), 5.35 (m, 0.5H), 6.43 (d, J=15.0 H

z, 1 H), 6. 44 (m, 1 H), 6. 90 (m, 1 H), 7. 32 (m, 2 H), 7. 51 (m, 2 H), 7. 62 (m, 1 H).

実施例 65 (3S)-3-{(S)-2-(4-メトキシシンナモイルアミノ)-4-メチルバレリルアミノ}-2-テトラヒドロフラノール (表-1の化合物番号 187) の製造

融点: 101-103°C

IR (KBr, cm<sup>-1</sup>): 3283, 1651, 1602, 1543, 1512.

NMR (CDCl<sub>3</sub>, δ): 0. 85-1. 05 (m, 6 H), 1. 60-1. 99 (m, 4 H), 2. 30 (m, 1 H), 3. 77 (s, 1. 5 H), 3. 79 (s, 1. 5 H), 3. 82 (m, 0. 5 H), 4. 10 (m, 1 H), 4. 30 (m, 0. 5 H), 4. 41 (m, 1 H), 4. 72 (m, 1 H), 5. 35 (m, 1 H), 6. 38 (d, J=15. 6 Hz, 0. 5 H), 6. 41 (d, J=15. 6 Hz, 0. 5 H), 6. 65-6. 85 (m, 2 H), 6. 90 (d, J=8. 5 Hz, 0. 5 H), 7. 15 (d, J=8. 5 Hz, 0. 5 H), 7. 20 (d, J=8. 5 Hz, 0. 5 H), 7. 43 (dd, J=8. 8 Hz, 3. 1 Hz, 2 H), 7. 49 (d, J=8. 5 Hz, 0. 5 H), 7. 58 (d, J=15. 6 Hz, 0. 5 H), 7. 59 (d, J=15. 6 Hz, 0. 5 H).

実施例 66 (3S)-3-{(S)-2-(4-フルオロフェニルスルホニアミノ)-4-メチルバレリルアミノ}-2-テトラヒドロフラノール (表-1の化合物番号 202) の製造

融点: 156-158°C

IR (KBr, cm<sup>-1</sup>): 3347, 3256, 1649, 1593, 1541.

NMR (DMSO-d<sub>6</sub>, δ) : 0. 71 (d, J=6. 5 Hz, 3 H), 0. 80 (d, J=6. 6 Hz, 3 H), 1. 28 (m, 2 H), 1. 45 - 1. 68 (m, 2 H), 1. 86 (m, 1 H), 3. 60 - 3. 95 (m, 4 H), 4. 98 (dd, J=4. 4 Hz, 4. 1 Hz, 1 H), 5. 37 (d, J=4. 1 Hz, 1 H), 7. 39 (dd, J=8. 8 Hz, 8. 3 Hz, 2 H), 7. 75 (d, J=7. 5 Hz, 1 H), 7. 81 (dd, J=8. 8 Hz, 5. 3 Hz, 2 H), 8. 00 (d, J=9. 0 Hz, 1 H).

実施例 67 (3S)-3-{(S)-2-(2-クロロフェニルスルホニルアミノ)-4-メチルバレリルアミノ}-2-テトラヒドロフラノール（表-1の化合物番号203）の製造

IR (KBr, cm<sup>-1</sup>) : 3365, 1657, 1541.

NMR (CDCl<sub>3</sub>, δ) : 0. 65 (d, J=6. 2 Hz, 1. 2 H), 0. 67 (d, J=6. 4 Hz, 1. 8 H), 0. 82 (d, J=6. 1 Hz, 1. 2 H), 0. 84 (d, J=6. 4 Hz, 1. 8 H), 1. 43 - 1. 72 (m, 4 H), 2. 13 (m, 0. 6 H), 2. 36 (m, 0. 4 H), 3. 62 - 4. 28 (m, 5 H), 5. 24 (d, J=3. 0 Hz, 0. 4 H), 5. 31 (dd, J=3. 8 Hz, 3. 8 Hz, 0. 6 H), 5. 91 (d, J=8. 8 Hz, 0. 4 H), 5. 94 (d, J=7. 9 Hz, 0. 6 H), 6. 47 (d, J=7. 5 Hz, 0. 4 H), 6. 65 (d, J=8. 1 Hz, 0. 6 H), 7. 38 - 7. 45 (m, 1 H), 7. 45 - 7. 60 (m, 2 H), 8. 06 (dd, J=7. 3 Hz, 1. 1 Hz, 1 H).

実施例 68 (3S)-3-{(S)-2-(4-クロロフェニルスルホニルアミノ)-4-メチルバレリルアミノ}-2-テトラヒドロフラノール（表-1の化合物番号205）の製造

融点: 112 - 115°C

IR (KBr, cm<sup>-1</sup>) : 3335, 3264, 1649.

NMR (CDCl<sub>3</sub>, δ) : 0.76 (d, J = 6.3 Hz, 0.6 H), 0.80 (d, J = 6.3 Hz, 2.4 H), 0.87 (d, J = 6.9 Hz, 0.6 H), 0.89 (d, J = 6.6 Hz, 2.4 H), 1.48 (m, 3 H), 1.68 (m, 1 H), 2.11 (m, 0.8 H), 2.40 (m, 0.2 H), 3.67 (ddd, J = 6.9 Hz, 6.9 Hz, 6.9 Hz, 1 H), 3.85 (m, 0.8 H), 3.94 (m, 0.2 H), 4.05 - 4.21 (m, 2 H), 5.18 (s, 0.2 H), 5.25 (d, J = 4.5 Hz, 0.8 H), 5.31 (d, J = 9.9 Hz, 0.2 H), 5.35 (d, J = 8.4 Hz, 0.8 H), 5.94 (d, J = 7.8 Hz, 0.2 H), 6.23 (d, J = 7.8 Hz, 0.8 H), 7.48 (d, J = 8.4 Hz, 2 H), 7.80 (d, J = 8.4 Hz, 2 H).

実施例 69 (3S)-3-{(S)-2-(4-プロモフェニルスルホニルアミノ)-4-メチルバレリルアミノ}-2-テトラヒドロフラノール（表-1の化合物番号208）の製造

融点: 139 - 140°C

IR (KBr, cm<sup>-1</sup>) : 3478, 3362, 3264, 1647, 1576, 1537.

NMR (DMSO-d<sub>6</sub>, δ) : 0.63 - 0.90 (m, 6 H), 1.15 - 1.42 (m, 2 H), 1.42 - 1.66 (m, 2 H), 1.83 (m, 0.65 H), 2.02 (m, 0.35 H), 3.45 - 3.92 (m, 4 H), 4.80 (d, J = 4.1 Hz, 0.35 H), 4.96 (ddd, J = 4.4 Hz, 4.4 Hz, 0.65 H), 6.10 (d, J = 4.1 Hz, 0.35 H), 6.36 (d, J = 4.4 Hz, 0.

6.5 H), 7.60-7.85 (m, 4.65 H), 7.95-8.15  
(m, 1.35 H).

実施例 70 (3S)-3-{(S)-4-メチル-2-(4-メチルフェニルスルホニルアミノ)バレリルアミノ}-2-テトラヒドロフラノール（表-1の化合物番号211）の製造

融点：137-138°C

IR (KBr, cm<sup>-1</sup>) : 3343, 3264, 1649, 1541.  
NMR (DMSO-d<sub>6</sub>, δ) : 0.66 (d, J=6.5 Hz, 0.9 H), 0.74 (d, J=6.7 Hz, 3 H), 0.80 (d, J=6.7 Hz, 2.1 H), 1.10-1.40 (m, 3 H), 1.53 (m, 1 H), 1.85 (m, 0.3 H), 1.98 (m, 0.7 H), 2.35 (s, 3 H), 3.51 (m, 0.7 H), 3.58-3.85 (m, 3.3 H), 4.78 (d, J=4.4 Hz, 0.7 H), 4.96 (m, 0.3 H), 6.07 (d, J=4.4 Hz, 0.7 H), 6.39 (d, J=3.9 Hz, 0.3 H), 7.31 (d, J=7.9 Hz, 2 H), 7.61 (d, J=7.9 Hz, 2 H), 7.66 (d, J=6.2 Hz, 0.3 H), 7.80 (m, 1 H), 7.92 (d, J=6.4 Hz, 0.7 H).

実施例 71 (3S)-3-{(S)-4-メチル-2-(2,4,6-トリメチルフェニルスルホニルアミノ)バレリルアミノ}-2-テトラヒドロフラノール（表-1の化合物番号215）の製造

融点：75-77°C

IR (KBr, cm<sup>-1</sup>) : 3328, 1657, 1605, 1541.  
NMR (CDCl<sub>3</sub>, δ) : 0.67 (d, J=6.3 Hz, 1.35 H), 0.68 (d, J=6.3 Hz, 1.65 H), 0.83 (d, J=6.4 Hz, 1.35 H), 0.84 (d, J=6.4 Hz, 1.65

H), 1. 38 - 1. 72 (m, 4 H), 2. 11 (m, 0. 65 H),  
 2. 29 (s, 3 H), 2. 31 (m, 0. 45 H), 2. 63 (s, 6  
 H), 3. 61 (m, 1 H), 3. 72 (d, J = 3. 0 Hz, 0. 45  
 H), 3. 74 - 3. 98 (m, 1 H), 3. 98 - 4. 24 (m, 2.  
 5 5. 55 H), 5. 23 (d, J = 3. 0 Hz, 0. 45 H), 5. 28 (d  
 , J = 3. 9 Hz, 3. 9 Hz, 0. 55 H), 5. 46 (d, J = 8.  
 6 Hz, 0. 45 H), 5. 60 (d, J = 8. 0 Hz, 0. 55 H),  
 6. 38 (d, J = 7. 4 Hz, 0. 45 H), 6. 54 (d, J = 8.  
 0 Hz, 0. 55 H), 6. 95 (s, 2 H).

10 実施例 72 (3 S) - 3 - { (S) - 2 - (4 - t e r t - ブチルフェ  
 ニルスルホニルアミノ) - 4 - メチルバレリルアミノ} - 2 - テトラヒド  
 ロフラノール (表-1 の化合物番号 218) の製造

融点 : 140 - 141 °C

IR (KBr, cm<sup>-1</sup>) : 3362, 3161, 1647, 1535.  
 15 NMR (DMSO-d<sub>6</sub>, δ) : 0. 74 (d, J = 6. 5 Hz, 3 H  
 ), 0. 81 (d, J = 6. 6 Hz, 3 H), 1. 15 - 1. 41 (m,  
 3 H), 1. 29 (s, 9 H), 1. 54 (m, 1 H), 1. 95 (m,  
 1 H), 3. 46 (m, 1 H), 4. 62 - 4. 82 (m, 3 H), 4.  
 80 (d, J = 4. 3 Hz, 1 H), 6. 06 (d, J = 4. 3 Hz, 1  
 H), 7. 53 (d, J = 8. 5 Hz, 2 H), 7. 66 (d, J = 8.  
 5 Hz, 2 H), 7. 82 (d, J = 9. 4 Hz, 1 H), 7. 95 (d  
 , J = 6. 7 Hz, 1 H).

実施例 73 (3 S) - 3 - { (S) - 2 - (4 - メトキシフェニルスル  
 ホニルアミノ) - 4 - メチルバレリルアミノ} - 2 - テトラヒドロフラノ  
 25 ール (表-1 の化合物番号 221) の製造

融点 : 153 - 155 °C

3 6 0

IR (KBr, cm<sup>-1</sup>) : 3 3 6 2, 3 1 5 0, 1 6 4 7, 1 5 9 7,  
1 5 3 5, 1 5 0 1.

NMR (DMSO-d<sub>6</sub>, δ) : 0. 6 9 (m, 0. 6 H), 0. 7 6  
(d, J=6. 5 Hz, 2. 7 H), 0. 8 2 (d, J=6. 7 Hz, 2  
5. 7 H), 1. 1 5 - 1. 4 5 (m, 3 H), 1. 5 6 (m, 1 H), 2  
. 0 1 (m, 1 H), 3. 5 4 (m, 1 H), 3. 6 0 - 3. 9 0 (m.  
3 H), 3. 8 1 (s, 3 H), 4. 8 9 (d, J=4. 6 Hz, 0. 9  
H), 4. 9 9 (m, 0. 1 H), 6. 0 9 (d, J=4. 6 Hz, 0.  
9 H), 6. 4 1 (d, J=2. 7 Hz, 0. 1 H), 7. 0 4 (d, J  
10 = 8. 8 Hz, 2 H), 7. 6 0 - 7. 8 0 (m, 3. 1 H), 7. 9 4  
(d, J=6. 9 Hz, 0. 9 H).

実施例 7 4 (3 S)-3-{(S)-4-メチル-2-(3-ニトロフェニルスルホニルアミノ)バレリルアミノ}-2-テトラヒドロフラノール(表-1の化合物番号 227)の製造

15 融点: 1 6 4 - 1 6 5 °C

IR (KBr, cm<sup>-1</sup>) : 3 3 5 8, 3 2 6 4, 1 6 4 9, 1 5 3 7.  
NMR (DMSO-d<sub>6</sub>, δ) : 0. 7 3 - 0. 9 5 (m, 6 H), 1  
. 2 0 - 1. 8 0 (m, 4. 7 5 H), 1. 9 5 (m, 0. 2 5 H), 3  
. 4 7 - 3. 6 5 (m, 2 H), 3. 7 7 (m, 1 H), 3. 9 4 (m.  
20 1 H), 4. 7 3 (d, J=2. 7 Hz, 0. 2 5 H), 4. 9 2 (dd  
, J=4. 1 Hz, 4. 1 Hz, 0. 7 5 H), 6. 0 6 (d, J=2.  
7 Hz, 0. 2 5 H), 6. 2 9 (d, J=4. 1 Hz, 0. 7 5 H),  
7. 8 0 - 7. 9 5 (m, 2 H), 8. 0 5 - 8. 2 1 (m, 1. 2 5 H  
), 8. 3 5 (d, J=8. 4 Hz, 0. 7 5 H), 8. 4 6 (d, J=  
25 7. 9 Hz, 1 H), 8. 5 0 (s, 1 H).

実施例 7 5 (3 S)-3-{(S)-4-メチル-2-(1-ナフチル

スルホニルアミノ) バレリルアミノ} -2-テトラヒドロフラノール(表  
-1の化合物番号229)の製造

融点: 89-91°C

IR (KBr, cm<sup>-1</sup>) : 3580, 3520, 3470, 3281,  
5 1647, 1553.

NMR (DMSO-d<sub>6</sub>, δ) : 0. 34 (d, J=6. 0Hz, 1.  
95H), 0. 51 (d, J=6. 2Hz, 1. 05H), 0. 62 (d  
, J=6. 1Hz, 1. 95H), 0. 71 (d, J=6. 4Hz, 1.  
05H), 1. 10-1. 60 (m, 4H), 1. 75-1. 95 (m,  
10 1H), 3. 47-3. 83 (m, 4H), 4. 73 (d, J=4. 5H  
z, 0. 35H), 4. 94 (dd, J=4. 3Hz, 4. 3Hz, 0.  
65H), 6. 03 (d, J=4. 5Hz, 0. 35H), 6. 34 (d  
, J=4. 3Hz, 0. 65H), 7. 50-7. 75 (m, 4H), 7  
. 86 (d, J=8. 2Hz, 0. 35H), 7. 98-8. 32 (m,  
15 3. 65H), 8. 66 (d, J=7. 4Hz, 1H).

実施例76 (3S)-3-{(S)-4-メチル-2-(2-ナフチル  
スルホニルアミノ) バレリルアミノ} -2-テトラヒドロフラノール(表  
-1の化合物番号230)の製造

融点: 102-104°C

20 IR (KBr, cm<sup>-1</sup>) : 3351, 1655, 1541.

NMR (DMSO-d<sub>6</sub>, δ) : 0. 65 (d, J=6. 4Hz, 1.  
5H), 0. 65-0. 90 (m, 4. 5H), 1. 14-1. 68 (m  
, 5H), 3. 25 (m, 0. 5H), 3. 57-3. 91 (m, 3. 5  
H), 4. 73 (s, 0. 5H), 4. 89 (dd, J=4. 3Hz, 4  
25 . 3Hz, 0. 5H), 5. 98 (s, 0. 5H), 6. 32 (d, J=  
4. 3Hz, 0. 5H), 7. 60-7. 80 (m, 3. 5H), 7. 9

## 3 6 2

3 (d, J=6. 7 Hz, 0. 5 H), 7. 98-8. 17 (m, 4 H),  
8. 38 (d, J=8. 3 Hz, 1 H).

実施例 77 (3S)-3-{(S)-4-メチル-2-(3-ピリジルスルホニルアミノ)バレリルアミノ}-2-テトラヒドロフラノール(表-1の化合物番号232)の製造

融点: 127-130°C

IR (KBr, cm<sup>-1</sup>): 3268, 1647.

NMR (CDCl<sub>3</sub>, δ): 0. 79 (d, J=6. 3 Hz, 0. 6 H), 0. 84 (d, J=6. 6 Hz, 2. 4 H), 0. 86 (d, J=6. 0 Hz, 0. 6 H), 0. 90 (d, J=6. 6 Hz, 2. 4 H), 1. 49-1. 61 (m, 3 H), 1. 71 (m, 1 H), 2. 09 (m, 0. 8 H), 2. 37 (m, 0. 2 H), 3. 78-3. 87 (m, 1. 8 H), 3. 96 (q, J=6. 6 Hz, 0. 2 H), 4. 05-4. 15 (m, 2 H), 5. 17 (s, 0. 2 H), 5. 22 (d, J=4. 8 Hz, 0. 8 Hz), 5. 75 (d, J=8. 7 Hz, 0. 8 H), 5. 79 (d, J=9. 3 Hz, 0. 2 H), 6. 13 (d, J=6. 6 Hz, 0. 2 H), 6. 36 (d, J=8. 1 Hz, 0. 8 H), 7. 45 (dd, J=7. 8 Hz, 4. 8 Hz, 1 H), 8. 17 (ddd, J=7. 8 Hz, 1. 8 Hz, 1 H), 8. 80 (dd, J=4. 8 Hz, 1. 2 Hz, 1 H), 9. 07 (d, J=2. 1 Hz, 1 H).

実施例 78 (3S)-3-{(S)-2-ベンジロキシカルボニルアミノ-3-フェニルプロピオニルアミノ}-2-テトラヒドロフラノール(表-1の化合物番号246)の製造

融点: 144-146°C

IR (KBr, cm<sup>-1</sup>): 3302, 1696, 1649, 1537.

NMR (CDCl<sub>3</sub>, δ): 1. 69 (m, 1 H), 2. 20-2. 4

3 6 3

1 (m, 1 H), 2. 60 (s, 0. 8 H), 2. 82 (s, 0. 2 H),  
 , 2. 97 (dd, J=14. 7 Hz, 7. 8 Hz, 1 H), 3. 13 (m, 1 H), 3. 81 (ddd, J=7. 8 Hz, 7. 8 Hz, 7. 8 Hz, 0. 8 H), 4. 02 (m, 1. 2 H), 4. 26 (m, 1 H), 4. 5. 37 (m, 1 H), 5. 09 (m, 3 H), 5. 40 (s, 1 H), 5. 70 (s, 0. 2 H), 6. 08 (s, 0. 8 H), 7. 33 (m, 1 H).

**実施例 79 (3S)-3-((S)-2-ベンジロキシカルボニルアミノ-3-tert-ブトキシプロピオニルアミノ)-2-テトラヒドロフ**

**ラノール(表-1の化合物番号297)の製造**

IR (KBr, cm<sup>-1</sup>) : 3322, 1719, 1661, 1534.  
 NMR (CDCl<sub>3</sub>, δ) : 1. 17 (s, 9 H), 1. 69-1. 98 (m, 1 H), 2. 30 (m, 0. 6 H), 2. 44 (m, 0. 4 H), 3. 40 (m, 1 H), 3. 62-3. 98 (m, 3 H), 4. 11 (m, 1 H), 4. 22 (m, 1 H), 4. 35 (m, 1 H), 5. 11 (s, 2 H), 5. 22 (s, 0. 4 H), 5. 29 (s, 0. 6 H), 5. 76 (s, 1 H), 6. 80 (s, 0. 4 H), 7. 08 (bs, 0. 6 H), 7. 35 (m, 5 H).

**実施例 80 (3S)-4-メチル-3-((S)-4-メチル-2-フェニルスルホニルアミノバレリルアミノ)-2-テトラヒドロフラノール(表-1の化合物番号320)の製造**

融点: 116-121°C

IR (KBr, cm<sup>-1</sup>) : 3356, 3272, 1655.  
 NMR (CDCl<sub>3</sub>, δ) : 0. 70 (d, J=6. 0 Hz, 2. 1 H), 0. 71 (d, J=6. 0 Hz, 0. 9 H), 0. 86 (d, J=6. 6 Hz, 3 H), 0. 95 (d, J=6. 6 Hz, 2. 1 H), 1. 0

3 6 4

4 (d, J = 6. 6 Hz, 0. 9 H), 1. 50 (m, 2 H), 1. 62  
 (m, 1 H), 2. 12 (m, 1 H), 3. 43 (m, 1 H), 3. 70  
 (m, 1 H), 3. 91 (m, 1 H), 4. 17 (dd, J = 8. 4 Hz  
 , 8. 4 Hz, 1 H), 5. 12 (d, J = 4. 5 Hz, 0. 3 H), 5  
 5. 25 (d, J = 4. 5 Hz, 0. 7 H), 5. 35 (d, J = 7. 2 Hz  
 , 0. 7 H), 5. 40 (d, J = 7. 2 Hz, 0. 3 H), 6. 34  
 (d, J = 8. 7 Hz, 0. 3 H), 6. 37 (d, J = 8. 7 Hz, 0  
 . 7 H), 7. 49 - 7. 62 (m, 3 H), 7. 88 (m, 2 H).

実施例 8 1 (3S) - 3 - ((S) - 2 - ベンジロキシカルボニルアミ  
 10 ノ - 4 - メチルバレリルアミノ) - 2 - テトラヒドロピラゾール (表 - 1  
 の化合物番号 433) の製造

IR (KBr, cm<sup>-1</sup>) : 3298, 1691, 1649, 1541.  
 NMR (CDCl<sub>3</sub>, δ) : 0. 90 - 0. 92 (m, 6 H), 1. 5  
 15 7 - 1. 70 (m, 7 H), 3. 43 - 3. 70 (m, 2 H), 3. 87  
 - 3. 99 (m, 2 H), 4. 08 - 4. 12 (m, 1 H), 5. 02 (s,  
 0. 4 H), 5. 08 (s, 1. 6 H), 5. 66 (s, 1 H), 6  
 . 57 (s, 0. 8 H), 6. 88 (s, 0. 2 H), 7. 31 (s, 5  
 H).

実施例 8 2 (3S) - 3 - { (S) - 2 - (2 - フルオロベンゾイルア  
 20 ミノ) - 4 - メチルバリレルアミノ} - 2 - テトラヒドロピラゾール (表  
 - 1 の化合物番号 450) の製造

IR (KBr, cm<sup>-1</sup>) : 3408, 1600, 1495.  
 NMR (CDCl<sub>3</sub>, δ) : 0. 92 - 0. 98 (m, 6 H), 1. 6  
 24 4 - 1. 82 (m, 7 H), 3. 48 - 3. 59 (m, 2 H), 3. 84  
 - 4. 13 (m, 2 H), 4. 68 - 4. 70 (m, 1 H), 5. 01 (m,  
 0. 3 H), 5. 05 (m, 0. 7 H), 6. 55 (d, J = 8. 3

H<sub>z</sub>, 0. 7 H), 6. 82 (d, J=8. 2 Hz, 0. 3 H), 7. 0  
7-7. 28 (m, 2 H), 7. 41-7. 52 (m, 1 H), 7. 99  
-8. 05 (m, 1 H).

実施例 8 3 (3 S)-3-{(S)-4-メチル-2-フェニルスルホ  
5 ニルアミノバレリルアミノ}-2-テトラヒドロピラノール(表-1の化  
合物番号 4 6 8)の製造

融点: 156-157°C

IR (KBr, cm<sup>-1</sup>): 3335, 3261, 1649, 1545.  
NMR (CDCl<sub>3</sub>, δ): 0. 67 (d, J=8. 5 Hz, 3 H),  
10 0. 85 (d, J=6. 0 Hz, 3 H), 1. 21-2. 05 (m, 7 H),  
3. 21 (d, J=4. 1 Hz, 0. 8 H), 3. 41-3. 78 (m, 2 H),  
3. 80-4. 07 (m, 2 H), 4. 19 (m, 0. 2 H),  
4. 95 (s, 1 H), 5. 23 (d, J=6. 8 Hz, 1 H), 6  
. 26 (m, 1 H), 7. 42-7. 68 (m, 3 H), 7. 87 (d,  
15 J=8. 5 Hz, 2 H).

実施例 8 4 (3 S)-3-{(S)-4-メチル-2-(2, 4, 6  
-トリメチルフェニルスルホニルアミノ)バレリルアミノ}-2-テトラ  
ヒドロピラノール(表-1の化合物番号 4 7 3)の製造

IR (KBr, cm<sup>-1</sup>): 3331, 1655, 1541.  
NMR (CDCl<sub>3</sub>, δ): 0. 66-0. 72 (m, 3 H), 0. 8  
3-0. 85 (m, 3 H), 1. 44-1. 97 (m, 7 H), 2. 28  
(s, 3 H), 2. 63 (s, 6 H), 3. 42-3. 75 (m, 2 H),  
3. 84-3. 98 (m, 2 H), 4. 40-4. 47 (m, 1 H),  
4. 93 (s, 1 H), 5. 47 (d, J=8. 4 Hz, 0. 3 H), 5  
25 . 53 (d, J=7. 8 Hz, 0. 7 H), 6. 34 (m, 1 H), 6.  
94 (s, 2 H).

実施例 8 5 (3S) - 3 - {(S) - 2 - (N-アセチル-N-4-メチルフェニルスルホニル) アミノ-4-メチルバレリルアミノ} - 2 - テトラヒドロフラノール(表-1の化合物番号515)の製造

融点: 49 - 51°C

5 IR (KBr, cm<sup>-1</sup>) : 3414, 1701, 1674, 1524.  
 NMR (CDCl<sub>3</sub>, δ) : 0.81 - 1.04 (m, 6H), 1.5  
 4 - 2.02 (m, 4H), 2.19 - 2.55 (m, 1H), 2.25  
 (s, 1.95H), 2.29 (s, 1.05H), 2.46 (s, 3H)  
 ), 2.85 (d, J=2.9Hz, 0.35H), 3.23 (d, J=  
 10 3.2Hz, 0.65H), 3.80 - 4.20 (m, 2H), 4.27  
 - 4.44 (m, 1H), 4.86 (t, J=7.7Hz, 0.35H)  
 , 4.97 (dd, J=7.7Hz, 6.3Hz, 0.65H), 5.2  
 4 (d, J=2.9Hz, 0.35H), 5.34 (dd, J=3.2H  
 z, 3.2Hz, 0.65H), 6.02 (d, J=7.4Hz, 0.3  
 15 5H), 6.41 (d, J=7.9Hz, 0.65H), 7.37 (d,  
 J=8.4Hz, 2H), 7.98 (d, J=8.4Hz, 0.7H),  
 8.05 (d, J=8.4Hz, 1.3H).

実施例 8 6 (3S) - 3 - {(S) - 2 - (N-アセチル-N-4-メ  
 トキシフェニルスルホニル) アミノ-4-メチルバレリルアミノ} - 2 -  
 20 テトラヒドロフラノール(表-1の化合物番号516)の製造

融点: 48 - 51°C

IR (KBr, cm<sup>-1</sup>) : 3414, 1701, 1595, 1522,  
 1501.  
 NMR (CDCl<sub>3</sub>, δ) : 0.84 - 1.06 (m, 6H), 1.5  
 25 7 - 2.01 (m, 4H), 2.24 (s, 1.95H), 2.29 (s  
 , 1.05H), 2.26 - 2.58 (m, 1H), 3.04 (d, J=

3 6 7

2. 6 Hz, 0. 35 H), 3. 42 (d, J = 3. 1 Hz, 0. 65 H), 3. 80 - 4. 18 (m, 2 H), 3. 89 (s, 1. 95 H), 3. 90 (s, 1. 05 H), 4. 24 - 4. 43 (m, 1 H), 4. 87 (dd, J = 7. 7 Hz, 6. 0 Hz, 0. 35 H), 4. 95 (t, J = 6. 9 Hz, 0. 65 H), 5. 24 (d, J = 2. 6 Hz, 0. 35 H), 5. 34 (dd, J = 3. 1 Hz, 3. 1 Hz, 0. 65 H), 6. 04 (d, J = 7. 1 Hz, 0. 35 H), 6. 42 (d, J = 8. 0 Hz, 0. 65 H), 7. 04 (d, J = 9. 0 Hz, 2 H), 8. 04 (d, J = 9. 0 Hz, 0. 7 H), 8. 12 (d, J = 9. 0 Hz, 1. 3 H).

**実施例 87** (3S) - 3 - { (S) - 2 - ((S) - 4 - メチル - 2 - フェニルスルホニルアミノバリレルアミノ) - 4 - メチルバレリルアミノ } - 2 - テトラヒドロフラノール (表 - 3 の化合物番号 1126) の製造  
融点: 186 - 188 °C

IR (KBr, cm<sup>-1</sup>) : 3285, 1644, 1549.  
 NMR (CDCl<sub>3</sub>, δ) : 0. 40 (d, J = 6. 3 Hz, 1. 2 H), 0. 52 (d, J = 5. 6 Hz, 1. 8 H), 0. 75 - 1. 00 (m, 9 H), 1. 32 - 2. 07 (m, 7 H), 2. 25 (m, 0. 6 H), 2. 40 (m, 0. 4 H), 3. 48 (d, J = 2. 8 Hz, 0. 4 H), 3. 59 (m, 1 H), 3. 73 - 3. 92 (m, 1. 2 H), 4. 02 - 4. 20 (m, 1. 4 H), 4. 21 - 4. 56 (m, 2 H), 5. 30 - 5. 38 (m, 1 H), 5. 59 (d, J = 4. 8 Hz, 0. 4 H), 5. 68 (d, J = 5. 9 Hz, 0. 6 H), 6. 82 (d, J = 8. 3 Hz, 0. 6 H), 6. 95 (d, J = 9. 7 Hz, 0. 4 H), 6. 99 (d, J = 8. 6 Hz, 0. 6 H), 7. 08 (d, J = 7. 0 Hz, 0. 4 H), 7. 47 - 7. 72 (m, 3 H), 7. 91 (d,

$J = 8, 5 \text{ Hz}, 2 \text{ H}$ .

実施例 88 (2S, 3S) - 2 - アセトキシ - 3 - ((S) - 4 - メチル - 2 - フェニルスルホニルアミノバレリルアミノ) テトラヒドロフラン (表 - 2 の化合物番号 716) の製造

参考例 1 で得られた (S) - 3 - ((S) - 4 - メチル - 2 - フェニルスルホニルアミノバレリルアミノ) - 2 - テトラヒドロフラノン 244 mg を塩化メチレン 35 ml に溶解して -78°C に冷却し、1. 01 mol/l の水素化ジイソブチルアルミニウムのトルエン溶液 1. 91 ml を加えた。-78°C で 3 時間攪拌した後、反応液に飽和塩化アンモニウム水溶液および酢酸エチルを加え、室温に戻したのちセライトで濾過し、セライトを酢酸エチルでよく洗浄した。濾液を飽和食塩水で洗浄後、硫酸マグネシウムで乾燥してからこれを濾過した。濾液を濃縮し、粗な (3S) - 3 - ((S) - 4 - メチル - 2 - フェニルスルホニルアミノバレリルアミノ) - 2 - テトラヒドロフラノール (実施例 1 の化合物) を得た。これをピリジン 1 ml に溶かし、氷冷下無水酢酸 1. 5 ml を加えてから氷冷下で 9 時間攪拌した後、メタノール 1. 5 ml を加え濃縮した。得られた残渣を酢酸エチルに溶解し、希塩酸、水、飽和重曹水、飽和食塩水で順次洗浄し、硫酸マグネシウムで乾燥してからこれを濾過した。濾液を濃縮し、得られた残渣に酢酸エチル 2. 5 ml およびヘキサン 2. 5 ml を加え攪拌し、生成した結晶を濾取し目的物 120 mg を得た。

収率： 44%

融点： 177 - 178°C

IR (KBr, cm<sup>-1</sup>) : 3409, 3100, 1753, 1659.

NMR (CDCl<sub>3</sub>, δ) : 0. 54 (d, J = 6. 3 Hz, 3H),

25 0. 80 (d, J = 6. 3 Hz, 3H), 1. 37 (m, 2H), 1. 59 (m, 1H), 1. 81 (m, 1H), 2. 16 (s, 3H), 2. 2

## 3 6 9

4 (m, 1 H), 3. 61 (m, 1 H), 3. 95 (ddd, J = 9. 3 Hz, 9. 0 Hz, 7. 5 Hz, 1 H), 4. 14 (ddd, J = 9. 3 Hz, 9. 3 Hz, 3. 0 Hz, 1 H), 4. 53 (m, 1 H), 4. 87 (d, J = 6. 6 Hz, 1 H), 6. 16 (d, J = 4. 5 Hz, 1 H), 6. 56 (d, J = 8. 7 Hz, 1 H), 7. 54 (m, 2 H), 7. 62 (m, 1 H), 7. 86 (dd, J = 7. 2 Hz, 1. 5 Hz, 2 H).

実施例 8 8 と同様の方法により、以下実施例 8 9 から実施例 1 1 7 の化合物を製造した。以下、その物性値を記す。

10 実施例 8 9 (2S, 3S)-2-アセトキシ-3-((S)-2-tert-butyl-2-トキシカルボニルアミノ-4-メチルバリレルアミノ) テトラヒドロフラン（表-2の化合物番号 547）の製造

融点：143-145°C

IR (KBr, cm<sup>-1</sup>) : 3297, 1748, 1659.

15 NMR (CDCl<sub>3</sub>, δ) : 0. 93 (d, J = 6. 0 Hz, 3 H), 0. 94 (d, J = 6. 0 Hz, 3 H), 1. 45 (s, 9 H), 1. 49 (m, 1 H), 1. 67 (m, 2 H), 1. 83 (m, 1 H), 2. 11 (s, 3 H), 2. 36 (m, 1 H), 3. 96 (ddd, J = 9. 3 Hz, 9. 3 Hz, 9. 3 Hz, 1 H), 4. 06 (m, 1 H), 4. 14 (ddd, J = 9. 3 Hz, 9. 3 Hz, 3. 0 Hz, 1 H), 4. 57 (m, 1 H), 4. 84 (s, 1 H), 6. 17 (s, J = 4. 8 Hz, 1 H), 6. 45 (s, 1 H).

20 実施例 9 0 (2S, 3S)-2-アセトキシ-3-((S)-2-ベンジロキシカルボニルアミノ-4-メチルバレリルアミノ) テトラヒドロフラン（表-2の化合物番号 551）の製造

25 融点：162-164°C

370

IR (KBr, cm<sup>-1</sup>) : 3310, 1687, 1655, 1535.  
 NMR (CDCl<sub>3</sub>, δ) : 0. 94 (d, J=6. 2Hz, 3H),  
 0. 95 (d, J=6. 2Hz, 3H), 1. 83 (m, 1H), 2. 0  
 7 (s, 3H), 2. 11 (m, 3H), 2. 36 (m, 1H), 3. 9  
 5 3 (ddd, J=7. 8Hz, 7. 8Hz, 7. 8Hz, 1H), 4. 0  
 9 (m, 2H), 4. 79 (m, 1H), 5. 12 (s, 2H), 5. 3  
 2 (s, 1H), 6. 04 (d, J=4. 2Hz, 1H), 6. 17 (d  
 , J=4. 4Hz, 1H), 7. 35 (m, 5H).

実施例 9 1 (2S, 3S)-2-アセトキシ-3-{(S)-2-(2  
 10 -クロロベンジロキシカルボニルアミノ)-4-メチルバレリルアミノ}  
 テトラヒドロフラン(表-2の化合物番号558)の製造

融点 144-147°C

IR (KBr, cm<sup>-1</sup>) : 3314, 3076, 1699, 1655,  
 1535.  
 15 NMR (CDCl<sub>3</sub>, δ) : 0. 92-0. 95 (m, 6H), 1. 5  
 1-1. 84 (m, 4H), 2. 08 (s, 3H), 2. 34 (m, 1H)  
 ), 3. 95 (dd, J=8. 8Hz, 7. 4Hz, 1H), 4. 09-  
 4. 16 (m, 2H), 4. 57 (m, 1H), 5. 19 (d, J=13  
 . 0Hz, 1H), 5. 23 (s, 1H), 5. 26 (d, J=13. 0  
 Hz, 1H), 6. 16 (d, J=4. 3Hz, 1H), 6. 29 (s,  
 20 1H), 7. 25-7. 29 (m, 2H), 7. 37-7. 41 (m, 2  
 H).

実施例 9 2 (2S, 3S)-2-アセトキシ-3-{(S)-4-メチ  
 ル-2-(4-メチルベンジロキシカルボニルアミノ)バレリルアミノ}  
 25 テトラヒドロフラン(表-2の化合物番号566)の製造

融点：161-163°C

3 7 1

IR (KBr, cm<sup>-1</sup>) : 3314, 1691, 1651, 1539.

NMR (CDCl<sub>3</sub>, δ) : 0.91 - 0.93 (m, 6H), 1.46 (m, 4H), 2.07 (s, 3H), 2.32 (s, 3H), 2.33 (m, 1H), 3.94 (q, J=7.5 Hz, 1H), 4.08 - 4.15 (m, 2H), 4.57 (m, 1H), 5.05 (d, J=12.0 Hz, 1H), 5.06 (s, 1H), 5.09 (d, J=12.0 Hz, 1H), 6.15 (d, J=4.2 Hz, 1H), 6.32 (s, 1H), 7.15 (d, J=7.8 Hz, 2H), 7.23 (d, J=7.8 Hz, 2H).

10 実施例93 (2S, 3S)-2-アセトキシ-3-((S)-2-(9-フルオレニルメトキシカルボニルアミノ)-4-メチルバレリルアミノ)テトラヒドロフラン(表-2の化合物番号571)の製造

融点: 158 - 159°C

15 IR (KBr, cm<sup>-1</sup>) : 3308, 1746, 1692, 1657, 1537.

NMR (CDCl<sub>3</sub>, δ) : 0.94 (m, 6H), 1.52 - 1.74 (m, 3H), 1.64 (m, 1H), 2.06 (s, 3H), 2.36 (m, 1H), 3.96 (ddd, J=7.8 Hz, 7.8 Hz, 7.8 Hz, 1H), 4.11 (m, 2H), 4.19 (t, J=7.5 Hz, 1H), 4.43 (m, 2H), 4.56 (m, 1H), 5.15 (s, 1H), 6.06 (d, J=4.2 Hz, 1H), 6.22 (s, 1H), 7.31 (dd, J=7.5 Hz, 7.5 Hz, 2H), 7.41 (dd, J=7.5 Hz, 7.5 Hz, 2H), 7.58 (d, J=7.5 Hz, 2H), 7.77 (d, J=7.5 Hz, 2H).

25 実施例94 (2S, 3S)-2-アセトキシ-3-((S)-2-シクロヘキシルオキシカルボニルアミノ)-4-メチルバレリルアミノ)テトラ

## ヒドロフラン（表-2の化合物番号580）の製造

融点：135-137°C

NMR (CDCl<sub>3</sub>, δ) : 0. 92-0. 95 (m, 6H), 1. 2  
 6-1. 88 (m, 14H), 2. 10 (s, 3H), 2. 35 (m, 1  
 5 H), 3. 97 (m, 1H), 4. 10-4. 16 (m, 2H), 4. 5  
 1-4. 64 (m, 2H), 5. 03 (s, 1H), 6. 16 (d, J=  
 4. 5 Hz, 1H), 6. 40 (s, 1H).

## 実施例95 (2S, 3S)-2-アセトキシ-3-{(S)-4-メチル-2-(1-ナフチルアセチルアミノ)バレリルアミノ}テトラヒドロ

## 10 フラン（表-2の化合物番号605）の製造

融点：182-184°C

IR (KBr, cm<sup>-1</sup>) : 3308, 1745, 1644, 1551.  
 NMR (CDCl<sub>3</sub>, δ) : 0. 72 (d, J=6. 4 Hz, 3H),  
 0. 74 (d, J=6. 4 Hz, 3H), 1. 10-1. 35 (m, 2H  
 15 ), 1. 47 (m, 1H), 1. 67 (m, 1H), 2. 13 (s, 3H  
 ), 2. 20 (m, 1H), 3. 93 (ddd, J=8. 9 Hz, 8. 9  
 Hz, 8. 9 Hz, 1H), 3. 98-4. 15 (m, 3H), 4. 31  
 (m, 1H), 4. 46 (m, 1H), 5. 66 (d, J=8. 1 Hz,  
 1H), 6. 12 (d, J=4. 6 Hz, 1H), 6. 53 (d, J=8  
 20 . 6 Hz, 1H), 7. 05-7. 57 (m, 4H), 7. 80-7. 9  
 5 (m, 3H).

## 実施例96 (2S, 3S)-2-アセトキシ-3-{(S)-2-(2-フルオロベンゾイルアミノ)-4-メチルバレリルアミノ}テトラヒドロフラン（表-2の化合物番号633）の製造

25 融点：165-166°C

IR (KBr, cm<sup>-1</sup>) : 3343, 3304, 1748, 1694.

3 7 3

1640, 1551.

NMR (CDCl<sub>3</sub>, δ) : 0. 96 (d, J=5. 7 Hz, 3 H), 0. 98 (d, J=5. 7 Hz, 3 H), 1. 58 - 1. 95 (m, 4 H), 2. 10 (s, 3 H), 2. 39 (m, 1 H), 3. 95 (ddd, 5 J=9. 0 Hz, 9. 0 Hz, 7. 4 Hz, 1 H), 4. 14 (ddd, J=9. 0 Hz, 9. 0 Hz, 2. 9 Hz, 1 H), 4. 55 - 4. 75 (m, 2 H), 6. 19 (d, J=4. 8 Hz, 1 H), 6. 61 (d, J=8. 2 Hz, 1 H), 7. 00 (d, J=7. 4 Hz, 0. 5 H), 7. 02 (d, J=7. 4 Hz, 0. 5 H), 7. 15 (dd, J=8. 10 2 Hz, 7. 5 Hz, 1 H), 7. 29 (ddd, J=6. 8 Hz, 6. 8 Hz, 0. 9 Hz, 1 H), 7. 55 (m, 1 H), 8. 06 (ddd, J=7. 9 Hz, 7. 9 Hz, 1. 9 Hz, 1 H).

実施例 97 (2S, 3S)-2-アセトキシ-3-{(S)-2-(4-クロロベンゾイルアミノ)-4-メチルバレリルアミノ}テトラヒドロ  
15 フラン(表-2の化合物番号 641)の製造

融点: 204 - 205°C

IR (KBr, cm<sup>-1</sup>) : 3304, 1746, 1674, 1635.  
 NMR (CDCl<sub>3</sub>, δ) : 0. 96 (d, J=6. 1 Hz, 3 H), 0. 97 (d, J=6. 0 Hz, 3 H), 1. 58 - 1. 78 (m, 3 H), 1. 85 (m, 1 H), 2. 13 (s, 3 H), 2. 31 (m, 1 H), 3. 95 (m, 1 H), 4. 14 (ddd, J=8. 6 Hz, 8. 6 Hz, 2. 9 Hz, 1 H), 4. 50 - 4. 70 (m, 2 H), 6. 20 (d, J=4. 6 Hz, 1 H), 6. 62 (d, J=8. 3 Hz, 1 H), 6. 81 (d, J=7. 8 Hz, 1 H), 7. 41 (d, J=6. 7 Hz, 2 H), 7. 73 (d, J=6. 7 Hz, 2 H).

実施例 98 (2S, 3S)-2-アセトキシ-3-{(S)-4-メチ

3 7 4

ル - 2 - (2 - メチルベンゾイルアミノ) バレリルアミノ} テトラヒドロ  
フラン (表 - 2 の化合物番号 645) の製造

融点 : 185 - 186°C

IR (KBr, cm<sup>-1</sup>) : 3264, 1753, 1674, 1626.

5 NMR (CDCl<sub>3</sub>, δ) : 0. 99 (d, J = 5. 6 Hz, 6 H),  
1. 55 - 1. 93 (m, 4 H), 2. 11 (s, 3 H), 2. 30 (m,  
1 H), 2. 49 (s, 3 H), 3. 98 (m, 1 H), 4. 15 (d  
dd, J = 6. 3 Hz, 6. 3 Hz, 2. 9 Hz, 1 H), 4. 47 - 4  
. 70 (m, 2 H), 6. 19 (d, J = 4. 6 Hz, 1 H), 6. 28  
10 (d, J = 8. 2 Hz, 1 H), 6. 81 (d, J = 8. 4 Hz, 1 H)  
, 7. 16 - 7. 29 (m, 2 H), 7. 31 - 7. 40 (m, 2 H).

実施例 99 (2S, 3S) - 2 - アセトキシ - 3 - { (S) - 4 - メチ  
15 ル - 2 - (4 - メチルベンゾイルアミノ) バレリルアミノ} テトラヒドロ  
フラン (表 - 2 の化合物番号 647) の製造

融点 : 199 - 200°C

IR (KBr, cm<sup>-1</sup>) : 3318, 1746, 1663, 1630,

1534.

NMR (CDCl<sub>3</sub>, δ) : 0. 96 (d, J = 6. 0 Hz, 3 H),  
20 0. 97 (d, J = 6. 0 Hz, 3 H), 1. 59 - 1. 95 (m, 4 H)  
, 2. 12 (s, 3 H), 2. 29 (m, 1 H), 2. 40 (s, 3 H)  
, 3. 95 (m, 1 H), 4. 13 (ddd, J = 6. 3 Hz, 6. 3  
Hz, 2. 9 Hz, 1 H), 4. 49 - 4. 70 (m, 2 H), 6. 19  
(d, J = 4. 6 Hz, 1 H), 6. 58 (d, J = 7. 6 Hz, 1 H)  
25 , 6. 70 (d, J = 7. 6 Hz, 1 H), 7. 24 (d, J = 7. 8 Hz,  
2 H), 7. 69 (d, J = 7. 8 Hz, 2 H).

実施例 100 (2S, 3S) - 2 - アセトキシ - 3 - { (S) - 4 - メチル - 2 - (2, 4, 6 - トリメチルベンゾイルアミノ) バレリルアミノ } テトラヒドロフラン (表 - 2 の化合物番号 651) の製造

NMR (CDCl<sub>3</sub>, δ) : 0. 97 (d, J = 5. 0 Hz, 6 H),  
 5 1. 59 - 1. 79 (m, 3 H), 1. 89 (m, 1 H), 2. 11 (s  
 , 3 H), 2. 27 (s, 6 H), 2. 32 (s, 3 H), 2. 35 (m  
 , 1 H), 3. 95 (m, 1 H), 4. 14 (ddd, J = 9. 0 Hz,  
 9. 0 Hz, 2. 8 Hz, 1 H), 4. 55 - 4. 70 (m, 2 H), 5  
 . 98 (d, J = 8. 1 Hz, 1 H), 6. 09 (d, J = 4. 6 Hz,  
 10 1 H), 6. 84 (s, 2 H), 6. 86 (d, J = 7. 5 Hz, 1 H).

実施例 101 (2S, 3S) - 3 - { (S) - 4 - メチル - 2 - フェニルスルホニルアミノバレリルアミノ } - 2 - プロピオニルオキシテトラヒドロフラン (表 - 2 の化合物番号 720) の製造

融点: 154 - 156°C  
 15 IR (KBr, cm<sup>-1</sup>) : 3355, 3274, 1711, 1678.  
 NMR (CDCl<sub>3</sub>, δ) : 0. 56 (d, J = 6. 3 Hz, 3 H),  
 0. 80 (d, J = 6. 6 Hz, 3 H), 1. 17 (t, J = 7. 5 Hz  
 , 3 H), 1. 39 (m, 2 H), 1. 57 (m, 1 H), 1. 79 (m  
 , 1 H), 2. 23 (m, 1 H), 2. 40 (qd, J = 7. 5 Hz, 1  
 20 6. 8 Hz, 1 H), 2. 49 (qd, J = 7. 5 Hz, 16. 8 Hz,  
 1 H), 3. 62 (m, 1 H), 3. 94 (ddd, J = 9. 0 Hz, 9  
 . 0 Hz, 9. 0 Hz, 1 H), 4. 13 (ddd, J = 9. 3 Hz, 9  
 . 0 Hz, 3. 0 Hz, 1 H), 4. 92 (d, J = 6. 9 Hz, 1 H)  
 . 6. 17 (d, J = 4. 8 Hz, 1 H), 6. 49 (d, J = 8. 7 Hz  
 25 z, 1 H), 7. 53 (m, 2 H), 7. 62 (m, 1 H), 7. 86 (d, J = 6. 0 Hz, 2 H).

## 376

実施例 102 (2S, 3S)-3-((S)-4-メチル-2-フェニルスルホニルアミノバレリルアミノ)-2-ピバロイルオキシテトラヒドロフラン(表-2の化合物番号725)の製造

融点: 165-166°C

5 IR (KBr, cm<sup>-1</sup>) : 3293, 1640.

NMR (CDCl<sub>3</sub>, δ) : 0. 64 (d, J=5. 9Hz, 3H), 0. 81 (d, J=6. 1Hz, 3H), 1. 26 (s, 9H), 1. 48 (m, 3H), 1. 72 (m, 1H), 2. 23 (m, 1H), 3. 64 (m, 1H), 3. 94 (ddd, J=9. 1Hz, 9. 1Hz, 9. 1Hz, 1H), 4. 10 (ddd, J=9. 1Hz, 9. 1Hz, 3. 1Hz, 1H), 4. 45 (m, 1H), 5. 07 (d, J=7. 7Hz, 1H), 6. 10 (d, J=4. 5Hz, 1H), 6. 21 (d, J=8. 4Hz, 1H), 7. 51 (m, 2H), 7. 61 (m, 1H), 7. 86 (d, J=7. 1Hz, 2H).

15 実施例 103 (2S, 3S)-2-ベンゾイルオキシ-3-((S)-4-メチル-2-フェニルスルホニルアミノバレリルアミノ)テトラヒドロフラン(表-2の化合物番号728)の製造

融点: 184-185°C

IR (KBr, cm<sup>-1</sup>) : 3353, 3260, 1698, 1678.  
 20 NMR (CDCl<sub>3</sub>, δ) : 0. 55 (d, J=6. 0Hz, 3H), 0. 69 (d, J=6. 0Hz, 3H), 1. 30-1. 48 (m, 3H), 1. 90 (m, 1H), 2. 30 (m, 1H), 3. 64 (m, 1H), 4. 00 (ddd, J=9. 3Hz, 9. 0Hz, 7. 5Hz, 1H), 4. 19 (ddd, J=9. 3Hz, 9. 3Hz, 3. 0Hz, 1H), 4. 51 (m, 1H), 5. 13 (d, J=8. 1Hz, 1H), 6. 37 (d, J=6. 6Hz, 1H), 6. 39 (d, J=4. 2Hz,

3 7 7

1 H), 7. 26 - 7. 50 (m, 4 H), 7. 58 (m, 2 H), 7. 80 (dd, J = 7. 5 Hz, 1. 8 Hz, 2 H), 8. 06 (dd, J = 7. 8 Hz, 0. 9 Hz, 2 H).

実施例 104 (2S, 3S) - 2 - アセトキシ - 3 - { (S) - 2 - (5 - 4 - クロロフェニルスルホニルアミノ) - 4 - メチルバレリルアミノ} テトラヒドロフラン (表 - 2 の化合物番号 754) の製造

融点 : 136 - 137°C

IR (KBr, cm<sup>-1</sup>) : 3335, 3258, 1744, 1651, 1535.

NMR (CDCl<sub>3</sub>, δ) : 0. 61 (d, J = 6. 2 Hz, 3 H), 0. 83 (d, J = 6. 3 Hz, 3 H), 1. 35 - 1. 62 (m, 3 H), 1. 80 (m, 1 H), 2. 15 (s, 3 H), 2. 21 (m, 1 H), 3. 61 (m, 1 H), 3. 97 (ddd, J = 9. 1 Hz, 9. 1 Hz, 9. 1 Hz, 1 H), 4. 14 (ddd, J = 9. 1 Hz, 9. 1 Hz, 2. 9 Hz, 1 H), 4. 50 (m, 1 H), 5. 09 (d, J = 7. 3 Hz, 1 H), 6. 15 (d, J = 4. 6 Hz, 1 H), 6. 42 (d, J = 8. 8 Hz, 1 H), 7. 51 (d, J = 8. 6 Hz, 2 H), 7. 80 (d, J = 8. 6 Hz, 2 H).

実施例 105 (2S, 3S) - 3 - { (S) - 2 - (4 - クロロフェニルスルホニルアミノ) - 4 - メチルバレリルアミノ} - 2 - ピバロイルオキシテトラヒドロフラン (表 - 2 の化合物番号 755) の製造

融点 : 155 - 156°C

IR (KBr, cm<sup>-1</sup>) : 3366, 3229, 1726, 1684, 1664, 1543.

NMR (CDCl<sub>3</sub>, δ) : 0. 70 (d, J = 6. 3 Hz, 3 H), 0. 83 (d, J = 6. 4 Hz, 3 H), 1. 25 (s, 9 H), 1. 4

0 - 1. 82 (m, 4 H), 2. 23 (m, 1 H), 3. 62 (dd, J = 12. 5 Hz, 6. 4 Hz, 1 H), 3. 96 (ddd, J = 8. 9 Hz, 8. 9 Hz, 8. 9 Hz, 1 H), 4. 11 (ddd, J = 8. 9 Hz, 8. 9 Hz, 2. 9 Hz, 1 H), 4. 45 (m, 1 H), 5. 21  
 5 (d, J = 8. 2 Hz, 1 H), 6. 04 (d, J = 8. 6 Hz, 1 H), 6. 10 (d, J = 4. 5 Hz, 1 H), 7. 45 - 7. 55 (m, 2 H), 7. 75 - 7. 85 (m, 2 H).

**実施例 106 (2S, 3S)-2-アセトキシ-3-{(S)-4-メチル-2-(4-メチルフェニルスルホニルアミノ)バレリルアミノ}テ**

**10 トライドロフラン(表-2の化合物番号761)の製造**

融点: 159 - 160°C

IR (KBr, cm<sup>-1</sup>) : 3372, 1721, 1674, 1535.  
 NMR (CDCl<sub>3</sub>, δ) : 0. 52 (d, J = 6. 2 Hz, 3 H),  
 0. 80 (d, J = 6. 3 Hz, 3 H), 1. 36 (m, 2 H), 1. 5  
 15 6 (m, 1 H), 1. 83 (m, 1 H), 2. 16 (s, 3 H), 2. 2  
 2 (m, 1 H), 2. 44 (s, 3 H), 3. 59 (m, 1 H), 3. 9  
 4 (m, 1 H), 4. 14 (m, 1 H), 4. 56 (m, 1 H), 4. 8  
 1 (d, J = 6. 6 Hz, 1 H), 6. 15 (d, J = 4. 6 Hz, 1 H)  
 20 ), 6. 35 (d, J = 7. 8 Hz, 1 H), 7. 33 (d, J = 8. 0  
 Hz, 2 H), 7. 74 (d, J = 8. 0 Hz, 2 H).

**実施例 107 (2S, 3S)-2-アセトキシ-3-{(S)-4-メチル-2-(2, 4, 6-トリメチルフェニルスルホニルアミノ)バレリルアミノ}テトライドロフラン(表-2の化合物番号765)の製造**

融点: 158 - 159°C

25 IR (KBr, cm<sup>-1</sup>) : 3416, 3191, 1755, 1661,  
 1605, 1535.

379

NMR (CDCl<sub>3</sub>, δ) : 0. 56 (d, J=6. 3Hz, 3H), 0. 79 (d, J=6. 3Hz, 3H), 1. 39 (m, 2H), 1. 58 (m, 1H), 1. 81 (m, 1H), 2. 16 (s, 3H), 2. 24 (m, 1H), 2. 31 (s, 3H), 2. 62 (s, 6H), 3. 56 (m, 1H), 3. 94 (m, 1H), 4. 14 (m, 1H), 4. 52 (m, 1H), 5. 00 (d, J=7. 1Hz, 1H), 6. 15 (d, J=4. 6Hz, 1H), 6. 61 (d, J=8. 7Hz, 1H), 6. 97 (s, 2H).

実施例108 (2S, 3S)-2-アセチル-3-{(S)-2-(4-tert-ブチルフェニルスルホニルアミノ)-4-メチルバレリルアミノ}テトラヒドロフラン(表-2の化合物番号768)の製造

NMR (CDCl<sub>3</sub>, δ) : 0. 44 (d, J=6. 2Hz, 3H), 0. 77 (d, J=6. 2Hz, 3H), 1. 23-1. 43 (m, 2H), 1. 34 (s, 9H), 1. 55 (m, 1H), 1. 85 (m, 1H), 2. 17 (s, 3H), 2. 20 (m, 1H), 3. 59 (m, 1H), 3. 95 (m, 1H), 4. 13 (ddd, J=9. 0Hz, 9. 0Hz, 2. 9Hz, 1H), 4. 57 (m, 1H), 4. 95 (d, J=6. 4Hz, 1H), 6. 17 (d, J=4. 6Hz, 1H), 6. 77 (d, J=8. 7Hz, 1H), 7. 53 (d, J=8. 6Hz, 2H), 7. 78 (d, J=8. 6Hz, 2H).

実施例109 (2S, 3S)-2-アセチル-3-{(S)-2-(4-メトキシフェニルスルホニルアミノ)-4-メチルバレリルアミノ}テトラヒドロフラン(表-2の化合物番号771)の製造

融点: 157-158°C

IR (KBr, cm<sup>-1</sup>) : 3329, 3273, 1746, 1659, 1597, 1544, 1501.

3 8 0

NMR (CDCl<sub>3</sub>, δ) : 0. 54 (d, J=6. 1 Hz, 3 H),  
 0. 81 (d, J=6. 3 Hz, 3 H), 1. 38 (m, 2 H), 1. 5  
 6 (m, 1 H), 1. 84 (m, 1 H), 2. 16 (s, 3 H), 2. 2  
 2 (m, 1 H), 3. 56 (m, 1 H), 3. 88 (s, 3 H), 3. 9  
 5 5 (m, 1 H), 4. 15 (m, 1 H), 4. 56 (m, 1 H), 4. 8  
 1 (d, J=6. 4 Hz, 1 H), 6. 16 (d, J=4. 5 Hz, 1 H  
 ), 6. 68 (d, J=9. 2 Hz, 1 H), 6. 99 (d, J=8. 6  
 Hz, 2 H), 7. 79 (d, J=8. 6 Hz, 2 H).

実施例 110 (2S, 3S)-2-アセトキシ-3-{(S)-4-メ  
 10 チル-2-(2-ナフチルスルホニルアミノ)バレリルアミノ}テトラヒ  
 ドロフラン(表-2の化合物番号780)の製造

融点: 158-159°C

IR (KBr, cm<sup>-1</sup>) : 3337, 3275, 1723, 1676,  
 1543.

15 NMR (CDCl<sub>3</sub>, δ) : 0. 48 (d, J=6. 1 Hz, 3 H),  
 0. 76 (d, J=6. 2 Hz, 3 H), 1. 33-1. 75 (m, 4 H  
 ), 1. 97 (m, 1 H), 2. 15 (s, 3 H), 3. 68 (m, 1 H  
 ), 3. 87 (m, 1 H), 4. 05 (m, 1 H), 4. 42 (m, 1 H  
 ), 5. 19 (d, J=7. 1 Hz, 1 H), 6. 12 (d, J=4. 6  
 Hz, 1 H), 6. 53 (d, J=8. 7 Hz, 1 H), 7. 58-7.  
 20 71 (m, 2 H), 7. 82 (dd, J=8. 7 Hz, 1. 9 Hz, 1 H  
 ), 7. 87-8. 03 (m, 3 H), 8. 44 (s, 1 H).

実施例 111 (2S, 3S)-2-アセトキシ-3-{(S)-4-メ  
 25 チル-2-(3-ピリジルスルホニルアミノ)バレリルアミノ}テトラヒ  
 ドロフラン(表-2の化合物番号782)の製造

融点: 160-161°C

3 8 1

IR (KBr, cm<sup>-1</sup>) : 3410, 3075, 1753, 1657,  
1535, 1342, 1172.

NMR (CDCl<sub>3</sub>, δ) : 0. 68 (d, J=5. 9Hz, 3H),  
0. 85 (d, J=5. 9Hz, 3H), 1. 40-1. 62 (m, 3H  
5), 1. 80 (m, 1H), 2. 14 (s, 3H), 2. 22 (m, 1H  
), 3. 73 (m, 1H), 3. 96 (ddd, J=9. 1Hz, 8. 9  
Hz, 8. 9Hz, 1H), 4. 03 (ddd, J=9. 1Hz, 9. 1  
Hz, 3. 0Hz, 1H), 4. 45 (m, 1H), 5. 46 (m, 1H  
), 6. 13 (d, J=4. 6Hz, 1H), 6. 32 (d, J=8. 6  
10 Hz, 1H), 7. 48 (m, 1H), 8. 16 (ddd, J=8. 2H  
z, 1. 9Hz, 1. 9Hz, 1H), 8. 83 (dd, J=4. 9Hz  
, 1. 5Hz, 1H), 9. 07 (d, J=2. 3Hz, 1H).

実施例 112 (2S, 3S)-2-アセトキシ-3-{(S)-2-(  
N-アセチル-N-(4-メチルフェニルスルホニル)アミノ)-4-メ  
15 チルバレリルアミノ}テトラヒドロフラン(表-2の化合物番号 1065  
)の製造

融点: 154°C

IR (KBr, cm<sup>-1</sup>) : 3387, 1746, 1674, 1522.  
NMR (CDCl<sub>3</sub>, δ) : 0. 84 (d, J=6. 3Hz, 3H),  
20 0. 93 (d, J=6. 3Hz, 3H), 1. 58 (m, 2H), 1. 8  
4 (m, 1H), 2. 09 (m, 1H), 2. 12 (s, 3H), 2. 3  
3 (s, 3H), 2. 38 (m, 1H), 2. 47 (s, 3H), 3. 9  
6 (m, 1H), 4. 14 (m, 1H), 4. 55 (m, 1H), 4. 7  
8 (t, J=6. 8Hz, 1H), 6. 14 (d, J=4. 6Hz, 1H  
25 ), 6. 50 (d, J=8. 3Hz, 1H), 7. 39 (d, J=8. 1  
Hz, 2H), 7. 91 (d, J=8. 1Hz, 2H).

実施例 113 (2S, 3S)-2-アセトキシ-3-((S)-2-(N-アセチル-N-(4-メトキシフェニルスルホニル)アミノ)-4-メチルバレリルアミノ)テトラヒドロフラン(表-2の化合物番号1066)の製造

5 融点: 64-66°C

IR (KBr, cm<sup>-1</sup>): 3397, 1748, 1595, 1530.

NMR (CDCl<sub>3</sub>, δ): 0.85 (d, J=6.2Hz, 3H),

0.94 (d, J=6.3Hz, 3H), 1.59 (m, 2H), 1.85 (m, 1H), 2.08 (m, 1H), 2.12 (s, 3H), 2.310 2 (s, 1H), 2.37 (m, 1H), 3.90 (s, 3H), 3.96 (m, 1H), 4.15 (m, 1H), 4.56 (m, 1H), 4.79 (t, J=6.8Hz, 1H), 6.15 (d, J=4.7Hz, 1H), 6.51 (d, J=8.4Hz, 1H), 7.04 (d, J=9.0Hz, 2H), 7.97 (d, J=9.0Hz, 2H).

15 実施例 114 (2S, 3S)-2-アセトキシ-3-((S)-2-ベンジロキシカルボニルアミノ-4-メチルバレリルアミノ)-2-テトラヒドロフラン(表-2の化合物番号983)の製造

IR (KBr, cm<sup>-1</sup>): 3310, 1693, 1653, 1537.

NMR (CDCl<sub>3</sub>, δ): 0.90-0.93 (m, 6H), 1.4

20 3-1.77 (m, 7H), 2.11 (s, 3H), 3.65-3.74 (m, 2H), 4.08-4.17 (m, 2H), 5.09 (s, 2H), 5.30 (d, J=8.1Hz, 1H), 5.96 (d, J=2.7Hz, 1H), 6.17 (s, 1H), 7.34 (m, 5H).

25 実施例 115 (2S, 3S)-2-アセトキシ-3-((S)-2-(2-フルオロベンゾイルアミノ)-4-メチルバレリルアミノ)-2-テトラヒドロピラン(表-2の化合物番号1000)の製造

3 8 3

IR (KBr, cm<sup>-1</sup>) : 3298, 2947, 1633, 1545.  
 NMR (CDCl<sub>3</sub>, δ) : 0. 91 - 0. 98 (m, 6H), 1. 6  
 5 - 1. 77 (m, 7H), 2. 13 (s, 3H), 3. 64 - 3. 77  
 (m, 2H), 3. 90 (m, 1H), 4. 20 (m, 1H), 4. 60  
 5 (s, 1H), 6. 00 (d, J=3. 3Hz, 1H), 6. 42 (s,  
 1H), 7. 13 (m, 1H), 7. 26 (m, 1H), 7. 48 (m,  
 1H), 8. 02 (m, 1H).

実施例 116 (2S, 3S)-2-アセトキシ-3-{(S)-4-メチル-2-(2, 4, 6-トリメチルフェニルスルホニルアミノ)バレリ  
 10 ルアミノ}-2-テトラヒドロピラン (表-2の化合物番号 1023) の  
 製造

IR (KBr, cm<sup>-1</sup>) : 3418, 1658, 1606, 1523.  
 NMR (CDCl<sub>3</sub>, δ) : 0. 57 (d, J=6. 3Hz, 3H),  
 0. 79 (d, J=6. 3Hz, 3H), 1. 32 - 1. 78 (m, 7H  
 15 ), 2. 16 (s, 3H), 2. 29 (s, 3H), 2. 60 (s, 6H  
 ), 3. 49 (m, 1H), 3. 61 - 3. 78 (m, 2H), 4. 08  
 (m, 1H), 5. 08 (d, J=7. 2Hz, 1H), 5. 94 (d,  
 J=3. 0Hz, 1H), 6. 33 (d, J=8. 7Hz, 1H), 6.  
 95 (s, 2H).

20 実施例 117 (2S, 3S)-3-{(S)-2-(4-tert-ブチルフェニルスルホニルアミノ)-4-メチルバレリルアミノ}-2-ピ  
 バロイルオキシテトラヒドロフラン (表-2の化合物番号 1397) の製  
 造

融点: 166 - 167°C

25 IR (KBr, cm<sup>-1</sup>) : 3360, 1728, 1682, 1665,  
 1547.

NMR (CDCl<sub>3</sub>, δ) : 0. 55 (d, J = 6. 0 Hz, 3 H),  
 0. 78 (d, J = 6. 0 Hz, 3 H), 1. 25 (s, 9 H), 1. 3  
 2 (s, 9 H), 1. 38 - 1. 82 (m, 4 H), 2. 25 (m, 1 H)  
 ), 3. 60 (m, 1 H), 3. 95 (m, 1 H), 4. 12 (ddd,  
 5 J = 9. 0 Hz, 9. 0 Hz, 3. 0 Hz, 1 H), 4. 46 (m, 1 H)  
 ), 5. 05 (d, J = 7. 1 Hz, 1 H), 6. 10 (d, J = 4. 5  
 Hz, 1 H), 6. 41 (d, J = 8. 3 Hz, 1 H), 7. 52 (d,  
 J = 8. 6 Hz, 2 H), 7. 78 (d, J = 8. 6 Hz, 2 H).

実施例 118 (3S)-2-メトキシ-3-((S)-4-メチル-2  
 10 -フェニルスルホニルアミノバレリルアミノ)テトラヒドロフラン(表-  
 2の化合物番号741)の製造

実施例 88 で得られた (2S, 3S)-2-アセトキシ-3-((S)-  
 15 -4-メチル-2-フェニルスルホニルアミノバレリルアミノ)テトラヒ  
 ドロフラン 4.3 mg をメタノール 4.0 ml に溶かし、4 規定の塩化水素含  
 有酢酸エチル 1 ml を加えた。室温で一晩攪拌した後、飽和重曹水 7 ml  
 を加え、溶媒を留去した。残渣に飽和重曹水を加え、酢酸エチルで抽出し  
 た。抽出液を飽和食塩水で洗浄し、硫酸マグネシウムで乾燥した。乾燥剤  
 を濾過してから濾液を濃縮し、得られた粗生成物にヘキサンおよびジエチ  
 ルエーテルを加えて攪拌した後、濾過すると目的物 2.9 mg が得られた。

20 収率: 65%

融点: 84 - 90 °C

IR (KBr, cm<sup>-1</sup>) : 3268, 1647, 1618.

NMR (CDCl<sub>3</sub>, δ) : 0. 71 (d, J = 6. 6 Hz, 2. 1 H)  
 ), 0. 80 (d, J = 6. 6 Hz, 0. 9 H), 0. 84 (d, J = 6  
 25 . 6 Hz, 2. 1 H), 0. 88 (d, J = 6. 6 Hz, 0. 9 H), 1  
 . 42 - 1. 49 (m, 3 H), 1. 61 (m, 1 H), 2. 08 (m,

3 8 5

0. 3 H), 2. 27 (m, 0. 7 H), 3. 30 (s, 2. 1 H), 3  
1. 37 (s, 0. 9 H), 3. 63 (m, 1 H), 3. 69 (m, 0. 3  
H), 3. 81 - 4. 11 (m, 1. 7 H), 4. 13 (m, 1 H), 4  
1. 66 (s, 0. 7 H), 4. 71 (d, J = 4. 8 Hz, 0. 3 H),  
5 4. 66 (d, J = 7. 8 Hz, 0. 7 H), 5. 23 (d, J = 8. 4  
Hz, 0. 3 H), 5. 96 (d, J = 7. 8 Hz, 0. 7 H), 6. 1  
7 (d, J = 8. 7 Hz, 0. 3 H), 7. 47 - 7. 62 (m, 3 H)  
, 7. 86 (d, J = 7. 5 Hz, 2 H).

#### 試験例 1 システインプロテアーゼ阻害活性の測定

10 カテプシンB（シグマ社、C-6286）の阻害活性は、文献（Biochemical Journal, 201巻、189ページ、1982  
年）記載の方法に準じて測定した。その結果を表-5に示す。

m-カルバインは、ラットの脳より文献（Journal of Biological Chemistry, 259巻、3210ページ、1  
15 984年）記載の方法により精製し、その阻害活性は、文献（Journal of Biological Chemistry, 259巻、1  
2489ページ、1984年）記載の方法に準じて測定した。その結果を  
表-6に示す。

表-5および表-6より、本発明の化合物は、パパイン、カテプシンB、  
20 カテプシンL、カルバイン等のシステインプロテアーゼに対して、強い阻  
害活性を示すことがわかる。

表-5 カテプシンBの阻害活性

実施例番号の化合物 (表-1の化合物番号)	I C <sub>50</sub> (μM)	実施例番号の化合物 (表-1の化合物番号)	I C <sub>50</sub> (μM)
1 (196)	0.42	40 (113)	1.00
4 (20)	0.70	41 (114)	0.87
5 (21)	0.98	42 (115)	0.55
6 (22)	1.35	43 (121)	0.14
7 (23)	0.90	44 (125)	1.45
10 (27)	0.37	45 (126)	0.49
11 (28)	2.15	46 (127)	0.27
12 (29)	1.20	48 (130)	0.086
13 (31)	0.38	50 (134)	0.20
15 (37)	0.70	51 (137)	0.21
16 (38)	1.00	53 (140)	0.15
17 (40)	0.64	55 (142)	1.65
18 (44)	0.58	56 (144)	0.90
19 (46)	0.89	57 (148)	0.24
20 (47)	1.05	58 (152)	0.46
21 (49)	1.17	59 (156)	0.80
24 (53)	2.90	60 (157)	0.034
25 (54)	2.90	61 (161)	1.20
27 (60)	1.20	62 (170)	0.50
28 (61)	1.70	65 (187)	0.19
33 (85)	0.95	75 (229)	2.40
34 (90)	1.35	77 (232)	0.40
39 (112)	0.20	78 (246)	0.30
実施例番号の化合物 (表-3の化合物番号)	I C <sub>50</sub> (μM)		
87 (1126)	1.30		

表-6 カルバインの阻害活性

実施例番号の化合物 (表-1の化合物番号)	I C <sub>50</sub> (μM)	実施例番号の化合物 (表-1の化合物番号)	I C <sub>50</sub> (μM)
1 (196)	0.62	27 (60)	0.65
4 (20)	0.90	28 (61)	0.52
5 (21)	2.30	33 (85)	0.11
6 (22)	2.30	34 (90)	0.33
7 (23)	2.40	39 (112)	0.37
9 (25)	1.55	40 (113)	0.17
10 (27)	0.96	41 (114)	1.15
11 (28)	1.10	42 (115)	0.82
12 (29)	0.65	43 (121)	0.36
13 (31)	0.66	44 (125)	0.58
15 (37)	0.68	45 (126)	0.56
16 (38)	0.34	46 (127)	0.33
17 (40)	0.39	47 (129)	2.30
18 (44)	0.44	48 (130)	0.38
19 (46)	0.48	49 (131)	0.68
20 (47)	0.56	50 (134)	0.65
21 (49)	0.34	51 (137)	0.48
22 (51)	0.41	52 (138)	0.34
23 (52)	1.10	53 (140)	0.67
24 (53)	1.30	54 (141)	0.70
25 (54)	1.05	55 (142)	0.84
26 (57)	1.40	56 (144)	0.64

表-6 (つづき)

実施例番号の化合物 (表-1の化合物番号)	I C <sub>50</sub> (μM)
57 (148)	0.25
58 (152)	0.44
59 (156)	0.40
60 (157)	0.47
61 (161)	0.35
62 (170)	1.00
63 (175)	0.35
65 (187)	0.70
66 (202)	0.60
68 (205)	0.56
69 (208)	0.62
70 (211)	0.50
71 (215)	0.45
72 (218)	0.39
73 (221)	0.74
74 (227)	0.95
75 (229)	0.38
76 (230)	0.36
77 (232)	1.00
80 (320)	2.80
81 (468)	1.55
実施例番号の化合物 (表-3の化合物番号)	I C <sub>50</sub> (μM)
87 (1126)	0.78

## 試験例2 血液中での活性本体の生成

実施例8 8で得られた(2S, 3S)-2-アセトキシ-3-( (S) -4-メチル-2-フェニルスルホニルアミノバレリルアミノ) テトラヒドロフランをアセトニトリルに溶かし、最終濃度が100 μMになるようにラットの血清に添加した。37°Cで5分間インキュベーションした後、アセトニトリルを加え、遠心分離して得られた溶液部分をHPLCで測定した。その結果を第1図に示す。また、対比のため、実施例1で得られた(3S)-3-( (S) -4-メチル-2-フェニルスルホニルアミノバレリルアミノ)-2-テトラヒドロフラノールおよび実施例8 8で得られた(2S, 3S)-2-アセトキシ-3-( (S) -4-メチル-2-フェニルスルホニルアミノバレリルアミノ) テトラヒドロフランをアセトニトリルに溶かしたものとHPLCで測定した。その結果を第2図に示す。第1図および第2図より、加えた(2S, 3S)-2-アセトキシ-3-( (S) -4-メチル-2-フェニルスルホニルアミノバレリルアミノ) テトラヒドロフランの97%が加水分解され、活性本体である(3S)-3-( (S) -4-メチル-2-フェニルスルホニルアミノバレリルアミノ)-2-テトラヒドロフラノール(実施例1の化合物)に変換されていることが判明した。ヒトおよびイヌの血清でも同様の操作を行ない、活性本体が生成することを確認した。

HPLCの条件は以下の通り。

カラム Nucleosil 100<sub>5</sub> C<sub>18</sub>

4.6 × 250 mm (ナーゲル社製)

カラム温度 50°C

移動相 CH<sub>3</sub>CN : H<sub>2</sub>O : P I C A Low UV (Waters社製)

25 22 : 78 : 1

流速 1 ml/min

3 9 0

検出波長 UV 222 nm

この結果より、本発明の含酸素複素環誘導体は、生体内ですみやかに活性本体であるラクトール誘導体に変換されることがわかる。

## 試験例 3 急性毒性試験

5 SD 雌雄ラットに本発明の化合物を 0.5% CMC-Na 水溶液に懸濁させたものを強制経口投与し、7日間症状観察を行った。

実施例 88、96、106 の化合物の LD<sub>50</sub> 値は、いずれも > 200.0 mg/kg であった。

## 試験例 4 製剤例

## 10 (1) 錠剤

下記の成分を常法に従って混合し、慣用の装置により打錠した。

実施例 88 の化合物	30 mg
-------------	-------

結晶セルロース	60 mg
---------	-------

コーンスターク	100 mg
---------	--------

15 乳 糖	200 mg
--------	--------

ステアリン酸マグネシウム	4 mg
--------------	------

## (2) 軟カプセル剤

下記の成分を常法に従って混合し、軟カプセルに充填した。

実施例 88 の化合物	30 mg
-------------	-------

20 オリーブ油	300 mg
----------	--------

レシチン	20 mg
------	-------

## (3) 注射用製剤

下記の成分を常法に従って混合し、1 ml のアンプルを調整した。

実施例 25 の化合物	3 mg
-------------	------

25 塩化ナトリウム	4 mg
------------	------

注射用蒸留水	1 ml
--------	------

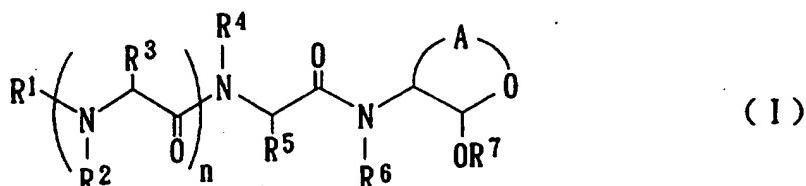
### 産業上の利用可能性

本発明の含酸素複素環誘導体は、パバイン、カテプシンB、カテプシンH、カテプシンL、カルバイン、インターロイキン1 $\beta$ 変換酵素等のシステムプロテアーゼに対して強い阻害作用を示し、また経口吸収性、組織移行性、細胞膜透過性にもすぐれていることから、筋ジストロフィー、筋萎縮症、心筋梗塞、脳卒中、アルツハイマー病、頭部外傷等の意識障害や運動障害、多発性硬化症、末梢神經のニューロパシー、白内障、炎症、アレルギー、劇症肝炎、骨粗鬆症、高カルシウム血症、乳癌、前立腺癌、前立腺肥大等の治療薬として、あるいは癌の増殖抑制、転移予防薬、血小板の凝集阻害薬として用いることができる。

## 請求の範囲

## 1. 下記一般式(I)

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(上記一般式(I)中、R<sup>1</sup>は水素原子、R<sup>8</sup>-C(=O)-、R<sup>8</sup>-O-C(=O)-、

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R<sup>8</sup>-N(H)-C(=O)-またはR<sup>8</sup>-S(=O)(=O)- (R<sup>8</sup>はC<sub>3</sub>～C<sub>8</sub>のシクロアルキル基、

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C<sub>3</sub>～C<sub>8</sub>のシクロアルキルオキシ基、フルオレニル基、C<sub>1</sub>～C<sub>5</sub>のアルコキシ基、置換基を有していてもよいC<sub>6</sub>～C<sub>14</sub>のアリール基、置換基を有していてもよいC<sub>6</sub>～C<sub>14</sub>のアリールオキシ基、置換基を有していてもよいC<sub>6</sub>～C<sub>14</sub>のアリールチオ基、置換基を有していてもよいC<sub>6</sub>～C<sub>14</sub>のアリールスルホニル基および置換基を有していてもよい複素環残基からなる群より選ばれる1以上の置換基を有していてもよいC<sub>1</sub>～C<sub>20</sub>のアルキル基；C<sub>3</sub>～C<sub>8</sub>のシクロアルキル基；置換基を有していてもよいC<sub>6</sub>～C<sub>14</sub>のアリール基；置換基を有していてもよいC<sub>6</sub>～C<sub>14</sub>のアリール基で置換されていてもよいC<sub>2</sub>～C<sub>5</sub>のアルケニル基；または置換基を有していてもよい複素環残基を表す)を表し、R<sup>2</sup>、R<sup>4</sup>およびR<sup>6</sup>はそれぞれ独立して水素原子、C<sub>1</sub>～C<sub>5</sub>のアルキル基またはC<sub>2</sub>～C<sub>6</sub>のアルカノイル基を表し、R<sup>3</sup>およびR<sup>5</sup>はそれぞれ独立して水素原子；置換基を有していてもよいC<sub>6</sub>～C<sub>14</sub>のアリール基、水酸基、C<sub>1</sub>～C<sub>5</sub>のアルコキシ基、C<sub>1</sub>～C<sub>5</sub>のアルキルチオ基およびC<sub>7</sub>～C<sub>12</sub>のアラルキルオキ

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シ基からなる群より選ばれる 1 以上の置換基を有していてもよい C<sub>1</sub> ~ C<sub>20</sub> のアルキル基；または置換基を有していてもよい C<sub>6</sub> ~ C<sub>14</sub> のアリール基

5 を表し、R' は水素原子、C<sub>1</sub> ~ C<sub>5</sub> のアルキル基または R'' - C - (R'' は C<sub>1</sub> ~ C<sub>10</sub> のアルキル基または置換基を有していてもよい C<sub>6</sub> ~ C<sub>12</sub> のアリール基を表す) を表し、A は C<sub>1</sub> ~ C<sub>5</sub> のアルキル基を有していてもよい C<sub>1</sub> ~ C<sub>5</sub> のアルキレン基を表し、n は 0 または 1 を表す) で表される含酸素複素環誘導体、その塩、その溶媒和物またはその水和物。

10 2. R<sup>1</sup> が水素原子、R<sup>8</sup> - C -、R<sup>8</sup> - O - C -、R<sup>8</sup> - N - C -、

または R<sup>8</sup> - S - (R<sup>8</sup> は C<sub>3</sub> ~ C<sub>8</sub> のシクロアルキル基、フルオレニル

基、置換基を有していてもよい C<sub>6</sub> ~ C<sub>14</sub> のアリール基、置換基を有していてもよい C<sub>6</sub> ~ C<sub>14</sub> のアリールオキシ基、置換基を有していてもよい C<sub>6</sub> ~ C<sub>14</sub> のアリールチオ基、置換基を有していてもよい C<sub>6</sub> ~ C<sub>14</sub> のアリールスルホニル基および置換基を有していてもよい複素環残基からなる群より選ばれる 1 以上の置換基を有していてもよい C<sub>1</sub> ~ C<sub>20</sub> のアルキル基；C<sub>3</sub> ~ C<sub>8</sub> のシクロアルキル基；置換基を有していてもよい C<sub>6</sub> ~ C<sub>14</sub> のアリール基；置換基を有していてもよい C<sub>6</sub> ~ C<sub>14</sub> のアリール基で置換されていてもよい C<sub>2</sub> ~ C<sub>5</sub> のアルケニル基；または置換基を有していてもよい複素環残基を表す) であり、R<sup>3</sup> および R<sup>5</sup> がそれぞれ独立して水素原子；または置換基を有していてもよい C<sub>6</sub> ~ C<sub>14</sub> のアリール基および C<sub>1</sub> ~ C<sub>5</sub> のアルコキシ基からなる群より選ばれる 1 以上の置換基を有していてもよい C<sub>1</sub> ~ C<sub>20</sub> のアルキル基である請求項 1 記載の化合物。

25 3. R<sup>2</sup>、R<sup>4</sup> および R<sup>6</sup> がそれぞれ独立して水素原子または C<sub>1</sub> ~ C<sub>5</sub>

のアルキル基である請求項2記載の化合物。

4. nが0である請求項3記載の化合物。



5. R<sup>1</sup> が R<sup>8</sup> - C - (R<sup>8</sup> は置換基を有していてもよいC<sub>6</sub> ~ C<sub>14</sub>のアリール基、置換基を有していてもよいC<sub>6</sub> ~ C<sub>14</sub>のアリールオキシ基、置換基を有していてもよいC<sub>6</sub> ~ C<sub>14</sub>のアリールチオ基および置換基を有していてもよいC<sub>6</sub> ~ C<sub>14</sub>のアリールスルホニル基からなる群より選ばれる1以上の置換基を有していてもよいC<sub>1</sub> ~ C<sub>20</sub>のアルキル基；置換基を有していてもよいC<sub>6</sub> ~ C<sub>14</sub>のアリール基；置換基を有していてもよいC<sub>6</sub> ~ C<sub>14</sub>のアリール基で置換されていてもよいC<sub>2</sub> ~ C<sub>5</sub>のアルケニル基；または置換基を有していてもよい複素環残基を表す)であり、R<sup>2</sup>、R<sup>4</sup>およびR<sup>6</sup> が水素原子であり、R<sup>3</sup> およびR<sup>5</sup> がそれぞれ独立してC<sub>1</sub> ~



10 C<sub>20</sub>のアルキル基であり、R<sup>7</sup> が水素原子またはR<sup>9</sup> - C - (R<sup>9</sup> はC<sub>1</sub> ~ C<sub>10</sub>のアルキル基を表す)であり、AがC<sub>1</sub> ~ C<sub>3</sub>のアルキレン基であり、nが0である請求項1記載の化合物。

6. R<sup>7</sup> が水素原子である請求項5記載の化合物。



7. R<sup>7</sup> が R<sup>8</sup> - C - (R<sup>8</sup> は炭素数1 ~ 10のアルキル基を表す)である請求項5記載の化合物。



8. R<sup>1</sup> が R<sup>8</sup> - C - (R<sup>8</sup> は置換基を有していてもよいC<sub>6</sub> ~ C<sub>14</sub>のアリール基で置換されていてもよいC<sub>1</sub> ~ C<sub>20</sub>のアルキル基または置換基を有していてもよいC<sub>6</sub> ~ C<sub>14</sub>のアリール基を表す)であり、R<sup>2</sup>、R<sup>4</sup>およびR<sup>6</sup> が水素原子であり、R<sup>3</sup> およびR<sup>5</sup> がそれぞれ独立してC<sub>1</sub> ~

$\text{C}_{20}$ のアルキル基であり、 $R^7$  が  $R^8 - \overset{\text{O}}{\underset{||}{\text{C}}} -$  ( $R^8$  は  $C_1 \sim C_{10}$  のアルキル基を表す) であり、Aが  $C_1 \sim C_3$  のアルキレン基であり、nが0である請求項1記載の化合物。

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9.  $R^1$  が  $R^8 - O - \overset{\text{O}}{\underset{||}{\text{C}}} -$  ( $R^8$  は  $C_3 \sim C_8$  のシクロアルキル基、フルオレニル基、置換基を有していてもよい  $C_6 \sim C_{14}$  のアリール基および置換基を有していてもよい複素環残基からなる群より選ばれる1以上の置換基を有していてもよい  $C_1 \sim C_{20}$  のアルキル基；  $C_3 \sim C_8$  のシクロアルキル基；または置換基を有していてもよい  $C_6 \sim C_{14}$  のアリール基を表す) であり、 $R^2$ 、 $R^4$  および  $R^6$  が水素原子であり、 $R^3$  および  $R^5$  がそれぞれ独立して水素原子；または置換基を有していてもよい  $C_6 \sim C_{14}$  のアリール基および  $C_1 \sim C_8$  のアルコキシ基からなる群より選ばれる1以上の置換基を有していてもよい  $C_1 \sim C_{20}$  のアルキル基であり、 $R^7$  が

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水素原子または  $R^8 - \overset{\text{O}}{\underset{||}{\text{C}}} -$  ( $R^8$  は  $C_1 \sim C_{10}$  のアルキル基を表す) であり、Aが  $C_1 \sim C_3$  のアルキレン基であり、nが0である請求項1記載の化合物。

10.  $R^7$  が水素原子である請求項9記載の化合物。

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11.  $R^7$  が  $R^8 - \overset{\text{O}}{\underset{||}{\text{C}}} -$  ( $R^8$  は  $C_1 \sim C_{10}$  のアルキル基を表す) である請求項9記載の化合物。

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12.  $R^1$  が  $R^8 - O - \overset{\text{O}}{\underset{||}{\text{C}}} -$  ( $R^8$  はフルオレニル基および置換基を有していてもよい  $C_6 \sim C_{14}$  のアリール基からなる群より選ばれる1以上の置換基を有していてもよい  $C_1 \sim C_{20}$  のアルキル基；または  $C_3 \sim C_8$  の

シクロアルキル基を表す)であり、R<sup>2</sup>、R<sup>4</sup>およびR<sup>6</sup>が水素原子であり、R<sup>3</sup>およびR<sup>5</sup>がそれぞれ独立してC<sub>1</sub>～C<sub>20</sub>のアルキル基であり、

R<sup>7</sup>がR<sup>8</sup>—C—(R<sup>9</sup>はC<sub>1</sub>～C<sub>10</sub>のアルキル基を表す)であり、Aが  
5 C<sub>1</sub>～C<sub>3</sub>のアルキレン基であり、nが0である請求項1記載の化合物。

13. R<sup>1</sup>がR<sup>8</sup>—N—C—(R<sup>9</sup>は置換基を有していてもよいC<sub>6</sub>～  
10 C<sub>14</sub>のアリール基を表す)であり、R<sup>2</sup>、R<sup>4</sup>およびR<sup>6</sup>が水素原子であり、R<sup>3</sup>およびR<sup>5</sup>がそれぞれ独立してC<sub>1</sub>～C<sub>20</sub>のアルキル基であり、

R<sup>7</sup>が水素原子またはR<sup>8</sup>—C—(R<sup>9</sup>はC<sub>1</sub>～C<sub>10</sub>のアルキル基または置換基を有していてもよいC<sub>6</sub>～C<sub>12</sub>のアリール基を表す)であり、AがC<sub>1</sub>～C<sub>3</sub>のアルキレン基であり、nが0である請求項1記載の化合物。  
15 14. R<sup>7</sup>が水素原子である請求項13記載の化合物。

15. R<sup>1</sup>がR<sup>8</sup>—S—(R<sup>9</sup>は置換基を有していてもよいC<sub>6</sub>～C<sub>14</sub>  
のアリール基または置換基を有していてもよい複素環残基を表す)であり、  
20 R<sup>2</sup>、R<sup>4</sup>およびR<sup>6</sup>が水素原子であり、R<sup>3</sup>およびR<sup>5</sup>がそれぞれ独立してC<sub>1</sub>～C<sub>20</sub>のアルキル基であり、R<sup>7</sup>が水素原子、C<sub>1</sub>～C<sub>3</sub>のアル

キル基またはR<sup>8</sup>—C—(R<sup>9</sup>はC<sub>1</sub>～C<sub>10</sub>のアルキル基または置換基を有していてもよいC<sub>6</sub>～C<sub>12</sub>のアリール基を表す)であり、AがC<sub>1</sub>～C<sub>3</sub>のアルキル基を有していてもよいC<sub>1</sub>～C<sub>3</sub>のアルキレン基であり、nが0である請求項1記載の化合物。

16.  $R^7$  が水素原子である請求項 15 記載の化合物。

17.  $R^7$  が  $C_1 \sim C_5$  のアルキル基である請求項 15 記載の化合物。

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18.  $R^1$  が  $R^8 - S -$  ( $R^8$  は置換基を有していてもよい  $C_6 \sim C_{14}$   
のアリール基を表す) であり、 $R^7$  が  $C_1 \sim C_5$  のアルキル基である請求項 15 記載の化合物。

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19.  $R^7$  が  $R^9 - C -$  ( $R^9$  は  $C_1 \sim C_{10}$  のアルキル基を表す) である請求項 15 記載の化合物。

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20.  $R^7$  が  $R^9 - C -$  ( $R^9$  は置換基を有していてもよい  $C_6 \sim C_{12}$  のアリール基を表す) である請求項 15 記載の化合物。

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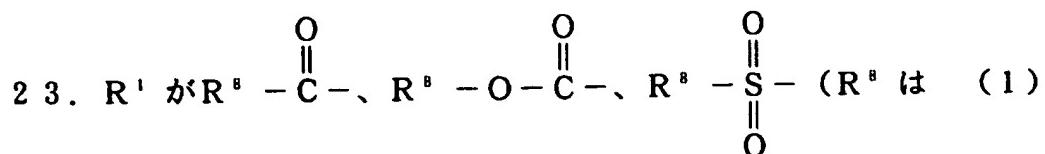
21.  $R^1$  が  $R^8 - S -$  ( $R^8$  は置換基を有していてもよい  $C_6 \sim C_{14}$   
のアリール基を表す) であり、 $R^7$  が  $R^9 - C -$  ( $R^9$  は置換基を有して  
してもよい  $C_6 \sim C_{12}$  のアリール基を表す) である請求項 15 記載の化合  
物。

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22.  $R^1$  が  $R^8 - C -$ 、 $R^8 - O - C -$ 、 $R^8 - S -$  ( $R^8$  は (1)  
 $C_1 \sim C_3$  のアルキル基、ハロゲン原子および  $C_1 \sim C_3$  のアルコキシ基  
からなる群より選ばれる 1 以上の置換基を有していてもよい  $C_6 \sim C_{14}$  の  
アリール基；  $C_3 \sim C_8$  のシクロアルキル基；または  $C_1 \sim C_3$  のアルキ

ル基から選ばれる 1 以上の置換基を有していてもよい複素環残基により置換されていてもよい C<sub>1</sub> ~ C<sub>6</sub> のアルキル基 (2) C<sub>3</sub> ~ C<sub>8</sub> のシクロアルキル基 (3) C<sub>1</sub> ~ C<sub>3</sub> のアルキル基、ハロゲン原子、ニトロ基、フルオレニル基および C<sub>1</sub> ~ C<sub>3</sub> のアルコキシ基からなる群より選ばれる  
 5 1 以上の置換基を有していてもよい C<sub>6</sub> ~ C<sub>14</sub> のアリール基 (4) C<sub>1</sub> ~ C<sub>3</sub> のアルキル基およびハロゲン原子からなる群より選ばれる 1 以上の置換基を有していてもよい C<sub>6</sub> ~ C<sub>14</sub> のアリール基により置換されていてもよい C<sub>2</sub> ~ C<sub>5</sub> のアルケニル基、または (5) C<sub>1</sub> ~ C<sub>3</sub> のアルキル基およびハロゲン原子からなる群より選ばれる 1 以上の置換基を有していてもよい複素環残基であり、R<sup>2</sup>、R<sup>4</sup> および R<sup>6</sup> が水素原子であり、R<sup>3</sup>  
 10 が C<sub>1</sub> ~ C<sub>6</sub> のアルキル基であり、R<sup>5</sup> が C<sub>6</sub> ~ C<sub>14</sub> のアリール基で置換されていてもよい C<sub>1</sub> ~ C<sub>6</sub> のアルキル基であり、R<sup>7</sup> が水素原子または

15  $\text{R}^{\circ} - \overset{\text{O}}{\underset{\parallel}{\text{C}}} -$  (R<sup>°</sup> は C<sub>1</sub> ~ C<sub>6</sub> のアルキル基を表す) である請求項 1 記載の化合物。



20 C<sub>1</sub> ~ C<sub>3</sub> のアルキル基、ハロゲン原子および C<sub>1</sub> ~ C<sub>3</sub> のアルコキシ基からなる群より選ばれる 1 以上の置換基を有していてもよい C<sub>6</sub> ~ C<sub>14</sub> のアリール基；C<sub>3</sub> ~ C<sub>8</sub> のシクロアルキル基；ピリジル基；C<sub>1</sub> ~ C<sub>3</sub> のアルキル基から選ばれる 1 以上の置換基を有していてもよいイミダゾール基；フリル基；テトラヒドロフリル基；またはテトラヒドロピラニル基により置換されていてもよい C<sub>1</sub> ~ C<sub>6</sub> のアルキル基 (2) C<sub>3</sub> ~ C<sub>8</sub> のシクロアルキル基 (3) C<sub>1</sub> ~ C<sub>3</sub> のアルキル基、ハロゲン原子、ニト

10 基、フルオレニル基およびC<sub>1</sub>～C<sub>3</sub>のアルコキシ基からなる群より選ばれる1以上の置換基を有していてもよいC<sub>6</sub>～C<sub>14</sub>のアリール基 (4)  
 C<sub>1</sub>～C<sub>3</sub>のアルキル基により置換されていてもよいC<sub>6</sub>～C<sub>14</sub>のアリール基により置換されたC<sub>2</sub>～C<sub>5</sub>のアルケニル基 (5) ピリジル基 (6) C<sub>1</sub>～C<sub>3</sub>のアルキル基から選ばれる1以上の置換基を有していてもよいイミダゾール基 (7) クロマニル基 (8) フリル基 (9) テトラヒドロフリル基または(10) テトラヒドロピラニル基を表す) であり、R<sup>2</sup>、R<sup>4</sup>およびR<sup>6</sup>が水素原子であり、R<sup>3</sup>がC<sub>1</sub>～C<sub>6</sub>のアルキル基であり、R<sup>5</sup>がC<sub>6</sub>～C<sub>14</sub>のアリール基で置換されていてもよいC<sub>1</sub>～

15 C<sub>6</sub>のアルキル基であり、R<sup>7</sup>が水素原子またはR<sup>9</sup>-C(=O)- (R<sup>9</sup>はC<sub>1</sub>～C<sub>6</sub>のアルキル基を表す) である請求項1記載の化合物。

24. AがC<sub>1</sub>～C<sub>3</sub>のアルキル基を有していてもよいエチレン基であり、nが0である請求項23記載の化合物。

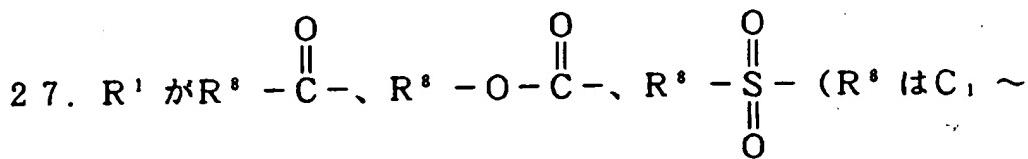
15 25. R<sup>1</sup>がR<sup>8</sup>-C(=O)-、R<sup>8</sup>-O-C(=O)-、R<sup>8</sup>-S(=O)- (R<sup>8</sup>はC<sub>1</sub>～

C<sub>3</sub>のアルキル基で置換されていてもよいC<sub>6</sub>～C<sub>14</sub>のアリール基で置換されていてもよいC<sub>1</sub>～C<sub>3</sub>のアルキル基；またはC<sub>1</sub>～C<sub>3</sub>のアルキル基から選ばれる1以上の置換基を有していてもよいC<sub>6</sub>～C<sub>14</sub>のアリール基を表す) であり、R<sup>2</sup>、R<sup>4</sup>およびR<sup>6</sup>が水素原子であり、R<sup>3</sup>および

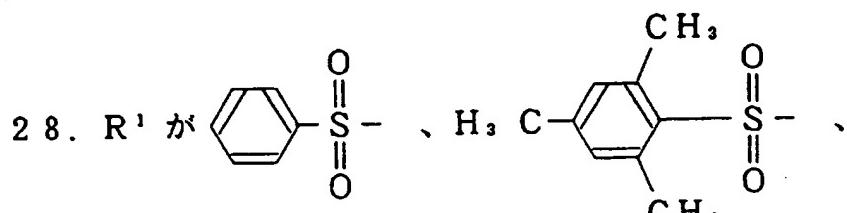
20 R<sup>5</sup>がC<sub>1</sub>～C<sub>6</sub>のアルキル基であり、R<sup>7</sup>が水素原子またはR<sup>9</sup>-C(=O)- (R<sup>9</sup>はC<sub>1</sub>～C<sub>6</sub>のアルキル基を表す) である請求項1記載の化合物。

25 26. nが0である請求項25記載の化合物。

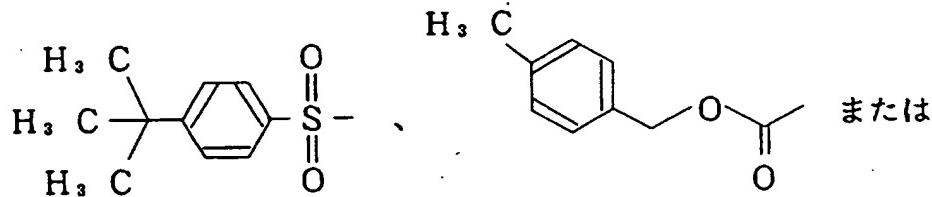
400



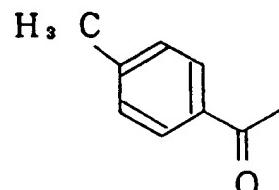
または  $R^8 - \overset{\text{O}}{\underset{\text{O}}{\text{C}}} -$  ( $R^8$  は  $C_1 \sim C_6$  のアルキル基を表す) であり、 $A$  がメチル基を有していてもよいエチレン基であり、 $n$  が 0 である請求項 1 記載の化合物。



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であり、 $R^4$  および  $R^6$  が水素原子であり、 $R^5$  が

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$C_1 \sim C_6$  のアルキル基であり、 $R^7$  が水素原子または  $R^8 - \overset{\text{O}}{\underset{\text{O}}{\text{C}}} -$  ( $R^8$  は  $C_1 \sim C_6$  のアルキル基を表す) であり、 $A$  がメチル基を有していても



よいエチレン基であり、nが0である請求項1記載の化合物。

29. 請求項1記載の化合物および薬学的に許容される担体を含有してなる医薬組成物。

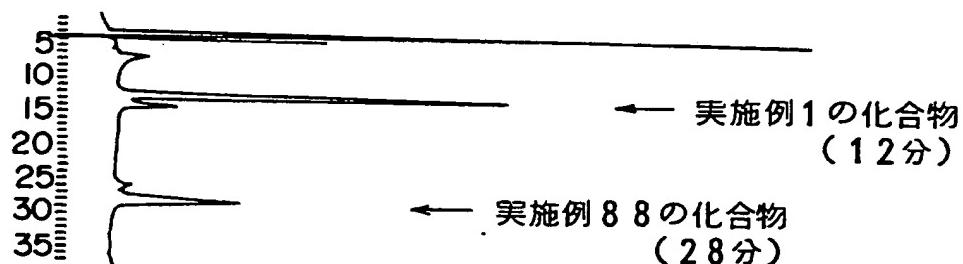
30. 請求項1記載の化合物および薬学的に許容される担体を含有してなるシステインプロテアーゼの異常亢進に起因する疾患のための医薬組成物。

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第 1 図



第 2 図



## INTERNATIONAL SEARCH REPORT

International application No.

PCT/JP96/00286

**A. CLASSIFICATION OF SUBJECT MATTER**

Int. Cl<sup>6</sup> C07D305/08, 307/22, 309/14, C07H5/06, 15/18, A61K31/335,  
31/34, 31/35, 31/70

According to International Patent Classification (IPC) or to both national classification and IPC

**B. FIELDS SEARCHED**

Minimum documentation searched (classification system followed by classification symbols)

Int. Cl<sup>6</sup> C07D305/08, 307/22, 309/14, C07H5/06, 15/18, A61K31/335,  
31/34, 31/35, 31/70

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)

CAS ONLINE

**C. DOCUMENTS CONSIDERED TO BE RELEVANT**

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
E	EP, 641800, A1 (Takeda Chemical Industries, Ltd.), March 8, 1995 (08. 03. 95) Claim & JP, 8-104685, A	1 - 30

<input type="checkbox"/>	Further documents are listed in the continuation of Box C.	<input type="checkbox"/>	See patent family annex.
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- \* Special categories of cited documents:
- "A" document defining the general state of the art which is not considered to be of particular relevance
- "E" earlier document but published on or after the international filing date
- "L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)
- "O" document referring to an oral disclosure, use, exhibition or other means
- "P" document published prior to the international filing date but later than the priority date claimed

- "T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention
- "X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone
- "Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art
- "&" document member of the same patent family

Date of the actual completion of the international search  April 24, 1996 (24. 04. 96)	Date of mailing of the international search report  May 14, 1996 (14. 05. 96)
Name and mailing address of the ISA/  Japanese Patent Office Facsimile No.	Authorized officer  Telephone No.

## A. 発明の属する分野の分類(国際特許分類(IPC))

Int. C1' C07D 305/08、307/22、309/14、C07H 5/06、15/18、  
A61K 31/335、31/34、31/35、31/70

## B. 調査を行った分野

## 調査を行った最小限資料(国際特許分類(IPC))

Int. C1' C07D 305/08、307/22、309/14、C07H 5/06、15/18、  
A61K 31/335、31/34、31/35、31/70

最小限資料以外の資料で調査を行った分野に含まれるもの

## 国際調査で使用した電子データベース(データベースの名称、調査に使用した用語)

CAS ONLINE

## C. 関連すると認められる文献

引用文献の カテゴリー*	引用文献名 及び一部の箇所が関連するときは、その関連する箇所の表示	関連する 請求の範囲の番号
E	EP、641800、A1 (Takeda Chemical Industries,Ltd.) 8. 3月. 19 95 (08. 03. 95) 請求の範囲 & JP、8-104685、A	1-30

C欄の続きにも文献が列挙されている。

パテントファミリーに関する別紙を参照。

## \* 引用文献のカテゴリー

「A」特に関連のある文献ではなく、一般的技術水準を示す  
もの

「E」先行文献ではあるが、国際出願日以後に公表されたも  
の

「L」優先権主張に疑義を提起する文献又は他の文献の発行  
日若しくは他の特別な理由を確立するために引用する  
文献(理由を付す)

「O」口頭による開示、使用、展示等に言及する文献

「P」国際出願日前で、かつ優先権の主張の基礎となる出願

## の日の後に公表された文献

「T」国際出願日又は優先日後に公表された文献であって  
て出願と矛盾するものではなく、発明の原理又は理  
論の理解のために引用するもの

「X」特に関連のある文献であって、当該文献のみで發明  
の新規性又は進歩性がないと考えられるもの

「Y」特に関連のある文献であって、当該文献と他の1以  
上の文献との、当業者にとって自明である組合せに  
よって進歩性がないと考えられるもの

「&」同一パテントファミリー文献

## 国際調査を完了した日

24. 04. 96

## 国際調査報告の発送日

14.05.96

## 国際調査機関の名称及びあて先

日本国特許庁 (ISA/JP)

郵便番号100

東京都千代田区霞が関三丁目4番3号

## 特許庁審査官(権限のある職員)

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